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ABSTRACT

The nine papers presented in the document are part of a conference held at Coombe Lodge in Bristol, England, which focused on an analysis of the objectives of vocational art and design education and a re-appraisal of the curriculum. The papers include the following: (1) The Report of the Working Group on Vocational Courses, (2) Design Education--A Perspective, (3) The Design Element in Professional Practice, (4) The Place of Complementary Studies, (5) Validation of Courses and Assessment Methods, (6) Plenary Session, (7) Photography and Film, (8) 3D and Environmental Design, and (9) Design by Computers. Each paper is followed by a summary of the discussions arising from the presentation. The document also includes an introduction to two projects: (1) Project A--to formulate the objectives of vocational art and design education and (2) Project B--to consider the possibilities of designing new forms of course structure in the art and design field. A list of participants and a bibliography are included. (Author/EC)

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Study Conference 74/17

Developments in Art Education

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FOREWORD

The week the Working Group Report on Vocational Courses in Art and Design was published a conference was held at Coombe Lodge which enabled participants to consider the objectives of vocational art and design education and to re-appraise the curriculum. Members had the opportunity to develop their own ideas on the future of vocational art and design education during the first part of the conference. On the Thursday of the conference week Mr. Gann introduced the Working Party's Report which was published the following day. There was a noteworthy measure of agreement between the members' conclusions and the contents of the Report, and its findings were welcomed by participants.

Other speakers addressed the conference on a variety of topics including validation, the place of complementary studies, the design element in professional practice, photography and film, typography, 3D and environmental design and design by computers. In addition to the papers published in this Report, Mr. Ruari McLean spoke of his own experiences in training as a professional designer.

A S Gann,
Assistant Secretary,
Department of
Education & Science

THE REPORT OF THE WORKING GROUP ON VOCATIONAL COURSES

Introducing Mr. Gann, the chairman put the Working Group Report into its historical perspective by referring to the first and second reports of the NACAE, drawing particular attention to the second of these which concerned vocational courses. Paragraph 11 of Circular 7/71 which set out the intention of the then Secretary of State, Mrs. Margaret Thatcher, to set up a Working Group following her consideration of the Coldstream Report (the Report of the Joint Committee of the NACAE and the NCDAD) of 1970 was then quoted:

> "11. The Report deals in Chapter 6 with courses for design technicians. This terminology has attracted some criticisms, but technician courses are a familiar concept in the wider field of further education. The Report invites the Secretary of State to establish a central body to be responsible for reviewing and planning a national pattern of design technician courses and for their validation and co-ordination. Without commitment to an ultimate solution along those lines, the Secretary of State proposes to review the pattern of courses in this area. This will be done by means of a Working Group, whose composition and terms of reference will be announced shortly. The proposal to make such a review does not imply any lack of appreciation of the excellent work being undertaken at present in a good many vocational courses in the Art and Design field in colleges up and down the country. Indeed, it will be a function of the Working Group to assemble information about these courses and to obtain the maximum of benefit from their experience. But the study will need to go wider, and take account of developments elsewhere in further education arising from the Haslegrave Report. On the basis of this study the Secretary of State will consider the further questions of national validation and co-ordination raised in the Report."

Mr. Gann began his talk by explaining that as circumstances had fallen out the Report had not, as had been hoped, already appeared but was due for publication the following morning. He would therefore in his talk have the task of introducing rather than commenting on it. He referred to the greater difficulty of this.

"When a Report is being written a good deal of trouble is taken over the choice of words, the turns of phrase, the order of presentation and the relative weight accorded to various aspects. This is a necessary part of the

work, for the exercise of writing a Report is concerned not only with the assembling of information and the development of proposals but with communication. As a result the final written document is the only authentic vehicle for the communication of what its compilers intended. The Report may not consistently succeed in communicating what its writers wished, but it is their best effort to do so.

I am prefacing my remarks with this caveat for two reasons. Firstly, I am giving the participants at this conference their first acquaintance with the Report through a medium other than the Report itself, and therefore run the risk of distorting or unbalancing it. Secondly, I shall make no apology for drawing heavily on the text, and, in selecting particular parts, will inevitably distort it.

Before I speak of the contents of the Report I must emphasise that I am here in a personal capacity, as the Chairman of the Working Group, and not as a spokesman for the DES or the Secretary of State who is, of course, the recipient of the Report and not its author.

If I may be permitted one more plea in mitigation of my own limitations, I must stress that I make no pretence to be anything other than a layman in the field of art and design education. I am simply an administrator, who in that role has had to deal with matters connected with art and design education in the FE sector. The Working Group comprised in its membership, however, various sorts of highly relevant expertise and experience."

terms of reference

Mr. Gann then reminded members of the terms of reference of the Working Group. They were:

> "To survey the provision of vocational courses in art and design below advanced level in colleges of art and other further education institutions; to consider the extent to which the provision meets employment needs; and to propose a pattern for the future having regard to the recommendations on design technician courses in the Report of the Joint Committee of the NACAE and the NCDAD and to relevant developments in further education".

Mr. Gann continued:

previous developments

"The Working Group set out to work, commissioned to take a closer look at a particular area of art and design education which formed just a part of the total spectrum covered by the Coldstream Report, but one which was less codified than the Dip AD and the foundation course areas and one on which there was less collected knowledge. The second Report of the NACAE of 1962 on vocational courses had viewed the provision of vocational courses as primarily a matter for local initiative and organisation by colleges in consultation with industry and commerce. The Minister of Education at that time had accepted that a national system of courses and examinations would not be appropriate at least in the initial stages, although there might be area groupings of colleges.

The Working Group took up the situation as it had developed after a decade of growth inevitably conditioned by the other more clearly charted developments taking place in the art colleges during that period - the development of Dip AD courses in 40 centres and the widespread growth of foundation courses with the positive but by no means exclusive function of feeding the Dip AD courses. While I would not want to say the vocational courses developed under the shadow of these other developments or that they formed the wilderness outside the garden, I merely suggest that theirs has tended to be a freer, varied and unstandardised growth, creating for the Working Group, if I may continue my botanical analogy, a flora of considerable fascination to study.

The remit of the Working Group, which was quoted above, fell into three parts: to survey the existing provision, to consider the extent to which it meets employment needs and to propose a pattern for the future. The Report in its three sections A, B and C deals successively with the three elements of this remit."

As conference members had not yet had the opportunity to read the Report, Mr. Gann circulated copies of the summary of the Report, which is printed below:

SUMMARY - GANN REPORT

"The Report deals in its three successive sections - A, B and C - with the three elements of the Working Group's remit.

Section A

2. This sets out "to survey the provision of vocational courses in art and design below advanced level in colleges of art and other further education institutions". The courses to be covered are identified (paragraphs 4-6) and total figures given of student numbers and of the types of institution offering courses (paragraphs 9-10). Tables I-IV break down the student figures for 1970-71 in various ways, and figures which subsequently became available for 1971-72 are given in Tables V and VI. Some further analyses of available statistics, and comment on them, are given in paragraphs 11 to 17.

3. The section continues with a survey of examining bodies which were identified as awarding certificates and other qualifications for vocational students in art and design in 1970-71 (paragraphs 18-20), and an account is given of the more detailed enquiries carried out about provision at selected colleges in 1972 (paragraphs 21-22).

4. The remainder of the section presents the impressions and conclusions of the Working Group about the pattern of courses and qualifications as it observed the situation (paragraphs 24-39).

The following are amongst the points noted:-

i. In contrast to the position in Further Education as a whole, vocational courses in art and design show a preponderance of students on full-time rather than part-time courses (paragraph 24).

ii. Despite the absence of a single pattern of vocational course provision, certain varied patterns and approaches can be discerned (paragraphs 25-31).

iii. The age of students and their educational attainments on entry to courses did not necessarily accord with the minimum requirements for the courses where specified (paragraphs 32-33).

iv. There was evidence of various lines of flow into and from vocational courses by students who had already taken or who went on to take other courses in art and design (paragraphs 34-35).

v. The diversity of pattern in vocational art and design provision may reflect the absence of a dominant examination system (paragraph 36). Growing use was observed of the LSIA award (paragraphs 37-38).

vi. Colleges were readier to claim that their vocational courses produced designers or assistant designers than that they produced design technicians. This was not a term that had gained acceptance, but there was some recognition of the function as distinct from the term (paragraph 39).

Section B

5. This section considers the extent to which the provision of courses meets employment needs. Evidence is looked at first of the experience of leavers from vocational courses in obtaining employment and some salient findings from the report "The Fmployment of Art College Leavers" are reviewed (paragraphs 42-47). More recent information obtained from colleges is referred to (paragraphs 48, 50 and 52) and the absence of systematic information on the careers of ex-students from vocational courses over a period of years is noted (paragraph 53).

6. On the question of the experience of industry of vocational course leavers, the diversity of the areas of industry and commerce served by the courses is noted (paragraphs 54-55). Three main areas of contact established by the Working Group are described - with the CBI and trade associations, with industry training boards and with individual employers (paragraphs 56-61).

7. Paragraphs 62-68 present some conclusions on employment.

i. No basis could be found for detecting consistent distinctions in the types and levels of jobs obtained by leavers from different levels of vocational course (paragraph 62).

ii. Vocational courses as a category were not easily distinguished by industry (paragraph 63).

iii. No generally accepted terminology exists to describe different levels of responsibility or function within art and design employment. Outside the ceramics field there is little use of the term design technician (paragraph 63).

iv. Despite the difficulties of nomenclature, there is recognition of different types and levels of function for which differing preparation may be appropriate (paragraph 64).

v. Importance is widely attached to the belief that the entrant to art and design work should have the opportunity of rising to the highest level should his ability justify it (paragraph 65).

vi. From present information it is not possible to assess to what extent the work found by leavers, and its accompanying prospects, are appropriate to the type, level and length of their course, or how efficiently the courses prepare students for the opportunities realistically available (paragraph 66).

vii. Colleges have contact with employers and such contacts must continue and grow (paragraphs 67-68).

Section C

8. This section covers the final part of the remit - "to propose a pattern for the future". Points are listed which lead to the view that some action is needed (paragraph 72).

9. The relevant recommendations of the report of the NACAE/NCDAD Joint Committee "The Structure of Art and Design Education in the Further Education Sector", and current and prospective developments in the field of Further Education generally are reviewed in accordance with the terms of reference (paragraphs 73-81).

10. Three facets of need for vocational courses are identified (paragraph 82).

11. A nationally recognised form of certification is seen as an essential (paragraph 83).

12. The Working Group recommends that:-

i. The Secretary of State should undertake the establishment of a separate national body for vocational courses in art and design (paragraph 88).

ii. This should be autonomous and have a title fully reflecting this status (paragraph 88).

iii. Its functions should in scope resemble those of TEC and BEC (paragraph 88).

iv. The membership should reflect the interests of education, industry and relevant professional bodies and allow also for regional involvement (paragraph 88).

v. There should be consultation with TEC and BEC to find an acceptable means whereby the national body could at the right point in time, and given suitable conditions, be brought into a formal relationship with TEC and BEC jointly (paragraph 90).

13. Without attempting a detailed specification of matters which would be for the proposed national body, a possible range and structure of courses is outlined, and views offered on related matters (paragraphs 92-93). Features of the suggested pattern include the following:-

i. Normal minimum entry requirements of general education would be for the validating body to settle, but a prima facie case is seen for appropriate minimum requirements in relation to some of the range of vocational study (paragraphs 95-98).

ii. Vocational education in art and design should have a place in the new patterns developing in Further Education (paragraph 100).

iii. A need is seen for routes of study which can be entered by school leavers of 16+ with a range of attainment in general education. Initial entry to the network should be kept as broad as possible, and movement between courses allowed for (paragraph 101).

iv. For school leavers of 16+, full time courses are suggested as follows

a. a 2-year course for those with suitable qualifications, leading to a certificate or diploma comparable in status to an OND;

b. a course for other students, not so qualified or motivated leading to a certificate serving a different purpose.

Solely for the purpose of identification within the Report, the terms Course 1 Certificate (C1) and Course 2 Certiciate (C2) are used to describe these respective qualifications (paragraph 101).

v. Openings for further study should be available to C1 Certificate holders not wishing to enter employment immediately. As one possibility amongst others it is hoped that there could be eligibility to apply for a Dip AD place. But as the main opening for further study a course leading to a Higher Certificate of the validating body is suggested (paragraphs 102-103).

vi. The duration of study for the C2 Certificate would not necessarily be uniform. Two years would normally be appropriate and in most cases sufficient but some needs might be better met by a three year period. Leavers would normally enter employment. Modular courses might permit students to acquire credits to which they could subsequently add to attain C1 Certificate level (paragraph 104).

14. It is hoped that local education authorities will give sympathetic consideration to applications for discretionary grants to students in all appropriate cases (paragraph 105).

15. If scope and need for sandwich courses is found to exist, the development of such a structure would be welcome (paragraph 106).

16. It is hoped that the national body would give early attention to the validation of part-time courses as alternative to full-time or sandwich, and would seek to establish qualifications of comparable status in each (paragraph 107).

17. The choice of titles for nationally recognised vocational qualifications in art and design would be for the proposed validating body (paragraph 108)."

Mr. Gann then went through the Report, expanding on the summary and elucidating various points.

existing provision

On section A. 2 Mr. Gann noted that the statistics used by the Working Group had been derived from a detailed analysis of DES returns, which had showed 229 different course qualification titles in the area of education covered by the Group. He quoted a few figures from the survey for the year 1970-71:

students on full time courses	9,844	
students on part time courses	3,551	
total number of students	13,395	
number of institutions offering courses	176	
comprising	54	art colleges
	20	polytechnics
	7	specialist colleges
	95	other FE colleges
number of examining bodies identified	15	
comprising	6	regional bodies
	2	LEAs
	6	professional bodies
	CGLI	

in addition many colleges were making their own awards.

Mr. Gann went on to describe the work the Group had done to fill out the basic information it had gathered from statistics. Questionnaires had been completed by 26 institutions and subsequently parties of Group members had visited 10 of these. Mr. Gann stressed that the activities of the Working Group should be viewed against the background of the great influx of information and views which came to it in writing from several dozen outside bodies and individuals and the discussions held at a later stage with the representatives of a number of these bodies.

Expanding on paragraph 4 ii of the summary Mr. Gann said that among the various patterns which could be discerned were two main approaches to vocational course provision: courses recruiting school leavers of 16+ for two or three years of study and courses habitually recruiting older students, normally aged 18 or so, commonly for three years of study. Sometimes the two approaches co-existed in a single college. On section 4 iv, Mr. Gann said that the Report commented on interaction between foundation and vocational courses.

employment needs

Moving on to Section B of the Report, Mr. Gann explained that 'employment needs' had been interpreted in two ways: as the need of employers for suitably equipped staff and the need of vocational course students for appropriate

jobs. Vocational courses could not be expected to be training courses geared to narrow job descriptions which might soon become outmoded but equally they were not expected to be organised without regard to the employment market and its specifications.

proposals

On Section C Mr. Gann began by describing the points the Group listed concerning the current situation, which led them to the view that some action was needed:

"College authorities provide non-advanced vocational courses as they wish, subject to such regional control as may be operated through the RACs. There is no single system of validation established on a national basis but a variety of bodies offering qualifications with colleges sometimes offering their own awards. The freedom of 10 years has produced some recurring patterns and great flexibility so there is a wide choice of courses available to intending students. Colleges are in liaison with industry both individually and through regional bodies. Students have a reasonable measure of success in obtaining employment, often in work related to their field of study. The Group saw much that was admirable in present vocational courses and partly attributed this to the freedom of development which has been possible, but felt that complacency would be unjustified, and that some action was needed. The content of courses could be in danger of being insufficiently related to the age and educational standards for entry and to the employment opportunities available to leavers. This made it harder for students to identify the right course for them. Save in local and specialised situations, courses were too diverse in level and end-point to present any but a blurred and confusing image to industry as a whole. Industry was hampered from engaging in a dialogue with the educational providers so its changing needs could be explored and through which it could become more aware of the potential qualities of emerging students. There was evidence of colleges seeking to fill the vacuum in the absence of an officially established national system of validation and certification, e.g. by making use of SIAD arrangements. Some courses faced problems through small numbers and too little was known of the ongoing pattern of careers of vocational course leavers.

Referring to the vocational courses chapter of the 1970 Coldstream Report, Mr. Gann said that the term 'design technician' had not gained general acceptability in colleges. The Working Group had made it clear that it was not committed to the use of this term but was more interested in the identification of function. It had found quite widespread acknowledgement that the definition of 'technician' described the kind of work carried out by many designers. This did not need to imply that those who would do this work could, or should, be finally identified on leaving school and put through courses which would deny alternative choices. The Working Group had formed the view that one of the main aims to be served in future arrangements would be a realistic structuring so that courses could be recognised both by their immediate objectives and by the opportunities they gave for subsequent study to which in some cases they might provide a first step.

The Working Group sympathised with the quest for an alternative to t. term 'vocational', so often used to describe any art and design courses which were not Dip AD, foundation, or post-Diploma courses. The Group, however retained its use, seeing a special quality in vocational courses, fitting to the name, as attracting students motivated by an expectation of employment in which they see themselves playing a realistic and practical part in the production process with the closest identification with the production and marketing of the products of the employing firm. Vocational courses were seen by the Group as covering a wider range than the 'design technician' courses recommended by the Report of the Joint Committee. If a structure of courses could be developed with a nationally titled qualification it was felt that this alone, as with the Dip AD, should give an adequate nomenclature for the courses themselves.

The Working Group had been required by its terms of reference to have regard to developments in further education generally. Mr. Gann referred to two noted in particular. One was the introduction of the TEC and the BEC to plan, co-ordinate and administer technician and comparable courses, examinations and qualifications of a national character in the technical and business sectors of technician education respectively. Another - in the particular field of art and design - was the consideration given last year by the NCDAD to future entry requirements for Dip AD courses, with particular reference made to the Working Group as a possible source of relevant developments. This had to be seen in the context of the projected merger of NCDAD with CNAA.

In approaching its recommendations, the Working Group expressed a belief in the need for vocational courses, identifying three facets of need which the Working Group saw as recognisable purposes, separate from those of Dip AD courses and of the existing foundation courses so far as the latter were geared to DipAD objectives. A system which allowed students to modify their choices as they proceeded was all the more likely to give satisfaction. From this it was a short step to a need to provide a recognisable point for courses to be identifiable by prospective students. The simplest form would be a certificate or other qualification whose recognition would be aided by having the same title in all areas of study and all parts of the country. Thus an essential was seen to be a nationally recognised form of certification.

Like the Coldstream Report of 1970 the Working Group therefore recommended the setting up of a national body for validation and development, but there were differences - the Group was thinking of vocational courses in somewhat wider terms and the question of a national body was considered in greater depth. The Report identified aspects calling for attention and criteria that the body should meet, and discussed ways such a body might be established. Paragraph 12 of the Summary gave the full terms of the recommendation, which Mr. Gann read out.

Coming to the pattern of courses - the final part of Section C - Mr. Gann said this was prefaced by a statement of some reluctance by the Working Group to attempt a detailed specification on matters which it would be the first task of the national body to decide. He continued "We say however that it may help both consideration of the proposal for a central body and general appreciation of the opportunities that we see for vocational education in art and design if we give some outline of a possible structure of courses and an indication of views on related matters.

"We take as a starting point for any structure the minimum school leaving age of 16. This is not to say that there can be no later entry points, or that people cannot enter at the starting point if they have passed that age." On the question of entry requirements for courses it would be for the proposed national body to settle questions of normal minimum requirements, but reasons were given for having such requirements based on considerations of benefit to the student.

Commenting on 13. ii, Mr. Gann said that this was important, always remembering the special characteristics of art and design education, to prevent isolation. It was not a question of wishing to force art and design education into inappropriate moulds, but to secure for it a place in the new developing pattern of FE and 16-19 courses.

Almost the last thing the Report did was to sketch out a possible pattern of courses. This pattern deliberately avoided too much definition, stressed Mr. Gann. Having decided to make a key recommendation for a national validating body it would have been illogical to do otherwise. The bones of the suggested range and structure were given in paragraph 13 of the Summary. The Report explained that the Group had not attempted to formulate a nomenclature for the proposed qualifications. This would be for the validating body and could be influenced by other developments.

Finally, Mr. Gann pointed to what would take place after the Report had been published

"It would be a mistake to assume that the recommendations are guaranteed acceptance. The Report is to be published without any commitment by the Department of Education and Science or the Secretary of State to what it contains or to its recommendations. The Secretary of State is inviting the views of a number of organisations on the proposal to establish a national body, and will at the same time welcome views more widely. Thus it will be for the Secretary of State to consider the recommendations in the light of its comments."

Discussion Arising

Members showed much appreciation of the Gann Report, particularly the thorough survey the Working Group carried out which formed the first part of the Report and the hope was expressed that the setting up of a national validating body, as recommended, would bring to vocational courses a liberality that has almost become a tradition in higher level art and design courses, through the NCDAD.

grants

Some concern was felt, however, over the linked issues of financial support for students over 18 and the possibility of creating first class and second class students. Many members thought that the Working Group should have put in a plea for mandatory rather than discretionary grants for students following vocational courses, as otherwise the Dip AD students would be seen as superior to them. Mr. Gann answered that as the law stood at present, mandatory awards in FE were available only to students on courses designated as first degree or comparable courses, and it was not in the Group's remit to make recommendations regarding this. The Group's task had been to examine the provision of courses and suggest how the different needs of different people might be met. A member commented that it would not be justifiable if mandatory awards were available to art students on lower as well as degree level courses yet not to other FE students in the same way.

TEC & BEC

On the matter of liaison with TEC and BEC, Mr. Gann was asked what would happen if these bodies produced a different pattern of certification from that recommended in the Report. He replied that while the Group had been working there had been a state of constant flux; TEC, for example, had been set up, but had not got into its stride. In any case as he had emphasised the proposals in the Report for a pattern and structure of courses were suggestions only and would be for the proposed national body to consider if established.

foundation courses

Would there be an introductory course before students went on to "C1" or "C2" certificate courses? Mr. Gann said that although the Group had not sought to make decisions - these would be for the validating body if and when set up - it was implicit in the suggested "C1" and "C2" courses that they would be available for entry without an introductory course. Diagnosis was a matter much discussed; he would himself expect the courses themselves to offer scope for this as necessary.

C Bradshaw,
Design Director,
Lyre & Spottiswoode
Limited

DESIGN EDUCATION - A PERSPECTIVE

"Before I present my paper, I would like to make a few apologies in advance: firstly, I apologise for the frequent intrusion of the personal pronoun, and indeed, the word design - this will occur because I am drawing so largely on my own experience. Secondly I should apologise if what I say seems obvious - but perhaps, on reflection, I should not be sorry for this, and take it as evidence that what was a few years ago a less familiar view is now more widely acceptable. I feel strongly though, that there are many ideas in the field of design education which need to become familiar but are not, as yet. My third apology is the exact opposite - that some of what I have to say will not be obvious enough, for design is a far from simple subject to talk about.

personal situation

A perspective of anything demands two things: a personal situation, and a view. My personal situation is that of a graphic designer, just like many others. But I am also a producer because I help run a printing firm for most of my time. In this part of my work I do not sell design, but a designed product. This is not the same position as that of many designers; who serve, and are served by, industry as freelances, but are not in industry. Therefore they are insulated from it, and have less effect on it, for either good or ill.

In my work I am trying, of course, to solve all kinds of problems that involve the arrangement of language and images on a flat surface (mostly paper). There are always many possible arrangements, but they are mostly dictated by fairly objective visual laws, by other objective constraints of technique, by words and their meanings, and by differing human attitudes, and many kinds of complex customs of human thought and feeling. One is sitting astride a river of print. Indeed, to change metaphor, I suppose my viewpoint is really from some outpost in the rough open country of the unsophisticated middle class, my main clientele, where I think the real advances in design are to be made, and where financial gun law makes life for most designers dangerous and short.

But in my position one is also trying to make these solutions valid within a more generalised hierarchy of problems: of worthwhile and effective work for hundreds of men and dozens of machines. And these latter solutions in turn lie within, and react upon, a firm's - my firm's - technical and organisational evolution over several or many years. And there must be feedback and interaction between each of these three levels.

Thus, for example, the use of a certain style for a computer-set journal has to be planned to exploit, with visual effectiveness and some economy, its present technical means of presentation; to allow evolution for editorial purposes that can be coped with, with no dislocation; and, at a later date, to be likely to allow - and indicate - a change-over of setting resources, which will allow more scope for design, and involve considerable factory reorganisation.

All this should not sound too frightening. Design in industry is what it is - that old tired, overworked, opaque, almost meaningless phrase. But perhaps it is because I was educated in an antique far away world of classics at an ancient university, that it seems to me that a large part of our world of design - and the world of art too - is nowadays hoodwinked and held back by the words it uses to describe what it does. So, with apologies let me spend a little time on some of these words.

changing concepts

Art, design, industry - they are all old words. Over centuries the realities behind them have changed, and therefore our thoughts about them have changed, and so to have the 'word-to-thought' relationships. But the change is not clear or universal - it varies with sub culture from person to person almost subconsciously and (most important) without warning. This is because words have no meaning whatever except by convention; and we do not have the same conventions.

Thus design was originally 'dessin' - drawing - to mean the use of pen and pencil in the production of a normally very precise drawing to show how something in the mind was to be seen. (The Royal Academy's object was expressed in the eighteenth century as the furtherance of the arts of design, understood then as drawing, painting and so forth.) But with the industrial revolution drawing was increasingly used to show how things were to be made, and as technology has grown more sophisticated the word design is used now in a wider sense: to mean planning - a purely mental activity, not even necessarily visual, as for example design of an experiment or an electronic circuit. Thus, the designers demanded in job advertisements are seldom people with developed visual training, but industrial planners with the simple utilitarian ability to express planning in working drawings. So there is a confusion, and not just at the level of understanding what's meant. It is that there are no agreed tools for thinking (i.e. words), for instance, about the increasingly important type of planning that is partly visual and partly non-visual - logical, linguistic, technical or sociological. Some people now use the word design for all this - all the planning that is needed for production; because it is all one problem. Whereas if the word is used to mean visual decoration alone, it is too easy to believe that this visual decoration is something which is different, and hence can be separated in planning. This leads to comic - no, tragic - errors: half training of designers and visual-only solutions. And these are, we know, the ones which so often do not work properly.

Art is another word with changing meaning. When culture was simpler, printing and sculpture could normally have objective function, and the know-how for it was describable by a word also used for the know-how of eg. boxing

But in the last two or three generations technology and new ideas have diminished the relevance of this objective function, and printing, sculpture, and so forth have become personal and often private visual research or play. So that, whereas design is now always concerned with an objective conscious purpose, with other people, and with industrial production, art need not be.

In other words, the realities surrounding the terms art and design have changed. Therefore to those concerned with these realities, the thoughts and therefore the thought-word relationships, that is their meanings, have also changed. Yet, for other people, who are not directly concerned with recent art and design developments, there has been no change in the meanings of these terms. So confusion has arisen. Art and design, in the modern world, are two quite different activities and ends, even though one person may move from one to the other on different occasions; just as a journalist may perhaps also write poetry. Design demands an ability to think straight and deal with people, as well as visual skill. Art requires the latter, but not necessarily the former. It needs also the utmost suspension of disbelief, if it is not to shrivel. Therefore it seems clear that the two activities suit different sorts of people. If this is so, there might be implications upon education. At present we seem to group the two types of student together in our thinking, as if they were the same. For instance I have never understood why we judge design students mainly by their portfolios - rather as if universities tried to assess arts (or science) students mainly by their poems.

The word 'industry' is also a trap, though in a simpler way. By those outside industry the word is often used in a very general sense to denote a single world whereas in fact it is thousands of groups of people producing things, all differing in small and often in big ways, because the people in them differ. The common factors tend to be the superficial ones - the same machinery, the same titles for jobs; whereas the way they work differs very greatly. And besides this, almost no industries consist of vertical integrations - that is, ones handling all stages in the manufacture of their product. Nearly all industries have clusters of surrounding groups which specialise in the supply of vital services or parts; and their name is not on the product, so the outer world forgets their existence. This is true of design which is at present largely conducted in small "freelance" groups. Freelance designers are of course apart from the industrial production groups, and have no financial or management link with them. Yet they are ever more widely effective, and are as much a part of their industries as designers in production units like myself. This has implications educationally upon the difficulties of industrial sandwich placement.

design in industry

But whether the unit is small or large, the agglomeration called industry with design inextricably mixed with it, inhabits a different part of the mind from education or art. Industry exists in a money-based economy, in which design, like its product, is made possible by result in money terms, rather than by a prior conviction. This logic does not imply only that old stereotype, 'It hasn't sold, so it's no good' but can-and must- influence decisions on whether to back new action or ideas, or a new product. Industry, like many other things in life, is competitive, but it is not necessarily a rate race: - spending

all one's time downing other people is not a recipe for long life'. Of course, industry involves intimate knowledge of production techniques, especially for the designer inside it, for whom they are his means of thought and success, and not merely a tiresome lot of facts to be swallowed. Moreover, the involvement with means is a responsibility which gives the designer in industry great increase in scope and thus in stature. A designer, unlike an artist, has to be involved with production and with other people - to listen or talk or write to them, and to persuade them. For many people these are skills which need to be learnt. They cannot easily be learnt on a campus, but have to be learnt on the job. This aspect of design has fundamental educational implications.

The way design is organised does not help either. The separation, for example of architects from the contractors producing their planning deprives them of the fruitful interplay which I find results from communicating with the people carrying out the plans I have to make. For a designer the advantages of involvement in a production unit are increasing, because in many industries (particularly my own, printing) technology is [illegible]intering' as it were, and where there were once only a few accepted [illegible]doing things now there are usually many more. Each has different characteristics to be explored, their own know-how and even their own technical language and coding. Lack of technical knowledge therefore incurs ever higher penalties - of poor design as well as waste and higher costs. Electronics and engineering have lived with this for longer and devised conscious management methods for innovation and planning to use its results in production. Now this planning is a supremely delicate and important side of management. At its detailed, on-the-job execution, it is known in those worlds as 'design' - and, clearly, it is design. Here I suspect is a signpost to the future in our field. Design is in fact planning, no more, and no less; and of course planning at its highest and most generalised level is the key function of management.

design and management

So, in reality today, there are no walls separating design from management in industry. The one is the other. It is time we faced up to this reality and made deductions - particularly with regard to design education.

design education

As I am not an educationalist I cannot say anything about how it is that good designers are educated or trained. I can only survey the process and try to assess the effectiveness of the product. Like others I am under the possible delusion that education can achieve something, and I can see how important design could be. Perhaps design education is worthless; and, as I conclude in my more pessimistic moments all education is forgotten or useless by the age of thirty, so why should a designer waste time with Dip AD, and why not begin by ruling lines at sixteen, and learn for himself. However this view is perhaps defeatist - perhaps education does no harm; or perhaps rather, if as probable it does no harm, the good it does outweighs the harm. So I am just about in favour of it on balance.

However I believe that there is unthinking misunderstanding in the way we use the word 'education'. It is used indiscriminately to mean all that makes a practising designer, and also to mean solely what is done at college. The two

are by no means identical. Heredity and early environment are vital to an individual's development and character, and have more effect on human performance than simply his visual interests and abilities. The same semantic confusion which causes us to forget this helps to encourage selection for design education on visual abilities alone and encourages the unknowledgeable outside world to think that visual and other abilities must be regarded as unconnected - just as if the Renaissance had never occurred.

To the outsider the vigour of design education is impressive. Generous educational resources, from video recorders to stacks of Letraset, tempt exploitation of technique, until the business of design - planning for industry - seems to be an industry in itself - the production of carefully ruled layouts and so forth. And perhaps this is exactly what has happened: design has fallen in love with itself. This process has stopped thought about what design really is. Layouts are not an end but a means - an overhead, in fact; not a self-sufficient activity but an embodiment of thought and decision as to what industry should do. More important still design is not a once-only, single-level affair, but something which happens and has to happen, continuously at all levels, in order for industry to continue. This last is what gives an unreal, almost comic, impression to much design education. It so often seems like a vast military exercise, and as unreal. The original plan is made ..... and what then? The changing realities of an evolving situation that demand repeated feedback and modification cannot be there, and are not. But these are, alas, the guts of design when it moves beyond the trivial. It is often the same in terms of organisation - plenty of Chiefs in view, but no Indians (yet many people would prefer to be Indians - and there is more work for them).

We know the reasoning behind the vast increase in 18-plus courses - the need to upgrade design and therefore its training (and better pay for teachers). But the result does seem rather often self-motivated and unadjusted to the outside world. Of course, life outside often makes adjustments, and the weaker products slip to the lowest rungs of the ladder. But sometimes they slip right off, and no-one can be proud of that. The organisation at the lower end of design is not very well planned and design education prefers to ignore the lower levels of its field; just as the rest of us do so often in the rest of life.

It is a historical accident that design, in the narrow sense, is taught in local authority schools and suchlike, rather than universities. This is indefensible, particularly when the existence of a national validating body for courses now clearly helps to impose uniformity and put limitations on the design of design education. There is, however, one small university graphic design course, that answers therefore only to its own university Senate for its whole form and philosophy. Its special quality makes inevitable pertinent questions about the assumptions underlying the organisations of the rest. One may reasonably suspect that some of these assumptions were founded upon a basic ignorance of design when they were made some years ago. The present approved mixture, as it were, of ideas on design education owes its existence to one of the old assumptions alluded to above; that art and design were basically identical. Some people, in fact, doubt whether art is at all effective as a foundation for

design. While art and design may have a beneficial influence upon each other, such a liaison may also limit art or hold design from the worlds in which it will be involved - the difficult worlds of technology, management, sociology, psychology etc. It may prove impossible to bring all these influences into education, but the effort to do so is increasingly being made - not least in the polytechnics, which have increasingly the means to make it possible at least.

complementary studies

From this failure to distinguish between art and design comes, I think, the quaint conception of complementary studies. This precautionary addition of a fixed percentage of 'something else' to a course may be part of the modular American "add-the-credits" view of education, but seems to me to contain no useful depth of culture. Its existence is a vast criticism of the teachers of the main subjects - an implication that their teaching is shallow or narrow. Perhaps this jaundiced view was, or is, justified, certainly it has seemed to breed its own justification in a vicious circle, with schools split into two sides, unknowing, and sometimes uncaring, about each other. Need such a split exist at all? It does not occur in other arts courses, nor in the university design course mentioned earlier, where the teachers combine both aspects, and the one side illuminates the other in their teaching, producing students who are notably more integrated in sensibility and outlook. This is worth pondering.

changed ethos

Perhaps this rather literary admixture to most design courses has another serious effect. The emphasis of all education of apprentices was upon 'doing', upon the old meaning of 'the arts' - on doing in a personally committed way, with the assumption of full responsibility for the product. For the products of this ethos, design could not be separated from the tools with which it was carried out. But in today's design schools, the ethos has changed. The up-to-date and often intelligent product of them will probably envisage some amateur unpaid, experimental practical experience, but normally look for eventual freelancing - uncommitted, even alienated, often fairly materialist and with a firmly limited view of his or her extent of responsibility. This present-day college-leaver stereotype fits less easily into the employment he has chosen. He is too inexperienced to start at the top, but psychologically unsuited to start at a lower level, from which he could best develop. Perhaps it is another result of the Western educational system, and only avoidable by changing that system.

vocational education

Perhaps this is the point where I should gingerly turn to the word 'vocational'. It, too, has its cluster of semantic barnacles. We need a structure of ideas about design education which will enable us to judge, for instance, the Gann Report, or any other development, consistently and clearly. For this we do need to see things clearly, as they now are and not to be prevented from doing so by question-begging and vague words. We are, of course, unlikely to understand the term 'vocational' in its old non-commercial sense as it is used, for instance, in religious seminaries. But it has been used in education to mean a course designed specifically to equip students for a particular job. This implies that a course so named differs from courses differently named

which are not designed to equip for a particular job. Yet I know of few courses in design schools today that are not basically and firmly job-oriented. To add a personal parenthesis, I feel this is a great pity. It is often thought that people in industry require nothing but instant manpower, completely trained before they join the firm, so no money need be spent on their training. In my view - and I'm not alone - the converse is almost always the case at the level at which we are concerned. The further away from the shop floor - or studio - the less important is actual knowledge and the more important are habits of mind and character traits. At present design students at the end of their course feel prepared for the world; but they are not, and it would be better if they realised this, and simply felt equipped to learn. From my own experience I have become very much in favour of sandwich courses; not just to give any knowledge, but because they give the student a sense of reality and a perception of the relative importance of such knowledge. (And apart from any other benefit, this perception is a wonderful motivator during the rest of the time at college). The important thing is to equip students not to be instant designers of a particular type, but to learn to be designers of whatever type their eventual career dictates.

If I return from a parenthesis on what courses might be to what they are, it is clear, I think, that all design courses are now firmly vocational, and that this word now has come to be used also for a purely administrative distinction, to mean any courses which are not validated by the NCDAD, regardless of the age group that they are for. So that this meaning of the word is of no educational value, and we should avoid using it in an educational, as opposed to organisational context. At present it is used for courses which happen to be usually less well funded than Diploma courses, and the word becomes a label and encourages a damaging sense of inferiority in the students concerned. This inferiority complex becomes mixed with the art/design muddle, so colleges contain Diploma students who are 'almost artists' on the one hand, and, on the other, 'design-for-printing' people, who are 'almost tradesmen'. The irony is that in fact they are so often basically the same.

courses

So there is at present, apart from the trap-words and snobbery, a fast-evolving situation in design education. As with other higher and further education situations, we have overall a 16-18 age group, most GCE 'O' level or CSE; and an 18-21 age-group. Probably for historical reasons, apprenticeships are out of favour in design, though they may be no more difficult to organise than sandwich courses. But they may perhaps at this moment be left out of account.

At 16-18 nowadays intending designers have several alternative routes. The first is the Foundation course. This is mostly a visual-only training, and so (for equally historical reasons) mostly art rather than design - that is, free endeavour rather than problem-solving. Such foundation courses are regarded as a preliminary to a design course. Secondly, some design courses exist of differing aims and achievements, for 16-18 year old students. Few, I think, content themselves with humble techniques likely to be of immediate relevance or usefulness, though of course there is plenty of this kind of work to be done. (The CGLI provides a national syllabus and examination system, in

graphic design at least, for this level or a little higher, but not many students take it). Thirdly, Design 'A' level courses are increasing in schools, many of which are intended to replace foundation courses.

Dip AD courses used to be almost the only ones offered to the 18-21 age group, but recently non-Diploma courses have proliferated even the university sector participating. There is a clear tendency in my experience for art and for design courses to diverge on their different routes, in spite of the 'A.D.' in the Diploma, and design courses in polytechnics have particularly tended to do so since they have found the neighbouring supporting disciplines they need. I think the SIAD direct-entry scheme, with its relatively objective assessment criteria, has particularly helped this kind of specific design course.

issues needing attention

While it would be inappropriate for me to make any detailed suggestions about how design courses might develop, it might be of use to mention one or two issues which seem to me to need attention. They will not be surprising ones. The first is the relationship between design students and the world they wish to enter. This relationship is not usually well adjusted - not, I am sure, the fault of the teachers, but due to the way in which schools and teaching are planned. Education until adulthood, once a dream for most people, is now open to all, yet many people are rejecting it on the grounds of its artificiality - its lack of comparability with the life outside the educational establishment. I frequently have students in my office for a four-week attachment and the extent and depth of their self-reappraisal after 15 years or so at school has to be seen to be believed: it is often a very hard time. Now, should this really be their first opportunity for it? Students in other disciplines, teachers and architects for example, have the opportunity to spend periods in the type of working environment they intend to be part of later, which gives them an opportunity to discover whether their chosen field really suits them, and to relate their college work to the industrial situation. There seems to be no educational reason why design students should not have this opportunity - only organisational difficulties to prevent it. Of course, some sandwich courses are offered in design, and the students I have met on them seem more level-headed and confident than those on full time courses. A three year non-Diploma sandwich course, for example, at Preston, trained its students sufficiently well to place them all in paid employment (not expenses only) by the end of their second year. A hot-house situation, this, forced on the school; but its students seemed to me much more clear-headed and confident, as might be expected. And that is no bad thing.

My next point also bears upon organisation - it is a plea for greater freedom for schools in planning design courses. The NCDAD did much to raise the standard of courses, particularly in its early years, but its panel are not infallible and I think major schools should be free, like universities, after a period of time to organise courses of their own, without having to meet stipulated criteria of content and staffing, and without having to go through the external regional or national hoops. I question, in any case, the logic of regional bodies, since the schools recruit nationally.

Finally, let me make some inter-related comments about the 16-18 year olds - putative or incipient designers. Schools for the 18-plus age group do little actively to influence their student intake - rather than stimulate applications they just wait to see those who come to them. The Department of Employment's career booklet is out-dated; the SIAD is now circulating a folder on careers in design to youth employment offices but the SIAD is still small. Schools, if they wished, could do more to encourage new entrants - some, it is true, do give talks to school children, but more could do so. More, too could publish prospectuses to interest young people rather than satisfy legal requirements. There are many able young people who would opt for a career in design if they knew what it really involved, and that, strangely enough, talent in drawing is not essential. Some discover their desire to be designers in later life, and manage, though it is difficult, to make a late start. Therefore it seems to me that we need to encourage the widest flexibility of entry into the design field. Surely the best way to achieve this would be for particular courses at the two levels of teaching, 16-18 and 18-21, to be tied to each other in sequence as little as possible. Thus 16-18 courses would give an introduction from which students could either enter employment or go on to an 18-21 course. Or, of course, students could join an 18-21 course direct from school with an A-level in design. This system does not imply training for that unreal job of design technician, without the chance to go on to higher levels. The concept is unreal in any case, for, in the design world, one cannot and does not keep down the individual who can rise. The educational system should cater, however, for people who evolve at different rates and in different directions from the norm.

I think I have taken up enough time with these suggestions. I must hope that in ways I cannot see or even expect, they may just conceivably result in action: that, after all, is the justification for this conference. Let me end with a quotation. When looking through material for this paper I came across a sentence I copied out many years ago and I offer it to you. It is by the Greek philosopher, Aristotle. He said

> "In practical matters, the end is not speculative knowledge of what is to be done, but rather the doing of it."

It is a designer's credo; and one that needs not to be forgotten."

Discussion Arising

sandwich courses

Virtually all the period left for discussion was spent on the subject of sandwich courses. First, comments were made regarding the difficulty of student placement. Mr. Bradshaw agreed that the situation was extremely difficult, but stressed that this was no reason for not trying to find students places in industry. Colleges should press the local authorities to provide better grant aid, for many firms were in London, which was an expensive area to live in

and firms would not all be able to pay students a full wage, although the vocational course at Preston prepared students in the first 18 months of their course to take on a fully paid job in industry. A few supportive comments were made by members whose colleges were trying to develop sandwich courses. One member informed the conference that the Furniture Industrial Training Board had agreed that industry should be paid £200 for every student it accepted on a sandwich placement.

The suggestion was made that the design department in a college should regard itself as a production unit and undertake work of a professional level. The teachers would regard themselves as artists or designers employed by the local authority and the students as apprentices. Mr. Bradshaw foresaw many problems arising under such a scheme. It would be difficult to strike a balance between commercial and other operations for example.

J Holland, OBE
Educational Secretary,
Society of Industrial
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THE DESIGN ELEMENT IN PROFESSIONAL PRACTICE

"In planning this paper I have wondered whether my subject might more accurately be considered as the professional element in design practice. Educational institutions are probably concerned very directly with teaching design in practice at various levels; much of my concern as Education Officer of the designers' professional organisation is with professional qualifications and professional conduct, and it is in discussing the introduction and application of these to the design student that I can be of most interest and I hope, help.

practice and professionalism

In attempting a practical examination of the subject a few working definitions may be in order. I have spent several hours within these walls on a previous occasion attempting to reach a concise definition of Design, and salutary as this exercise was, I doubt if there is a single entirely satisfactory answer, though we all know broadly what we mean by the word. But Practice and Professionalism may be in more need of definition. Practice is really the polite professional way of saying business - a doctor's business, a lawyer's business. It is not easy to arrive at a positive precise definition of professionalism, for by the strictest interpretation many so-called professions should not qualify. I suppose the doctor, the lawyer and the schoolmaster are unquestioned professionals, but the actor, the musician - the interpretive skills - where do they stand? For a working definition I suggest that the relationship with the client is a good yardstick; the professional is the expert who agrees directly or indirectly with his client to undertake and to complete, to the best of his capacity, an agreed office or project for a previously agreed fee or remuneration. A professional may be in a position where he could do better financially by giving up a job before it is finished, but he is under a moral obligation to do his best for his client until the original contract is completed or terminated by mutual consent. The tradesman is committed only so far as he is paid his price for goods or services. This I admit is far from being a really satisfactory definition, but perhaps it will serve for today's considerations.

Of course the professional has compensating safeguards as well as responsibilities. He cannot be expected to act unprofessionally against the interests of his fellows. He should not be expected to accept less than the rates for his services that the profession regards as fair and adequate; he must not agree to payment entirely on results - nothing if you lose this case, 20% if you win. The client-professional relationship should be one of mutual trust. For

example, the designer or architect who recommends his client to use a particular contractor or builder must do so with no ulterior interest, no understanding with the contractor undisclosed to the client.

However negative and roundabout this is as near as we are likely to get, since all professional relationships are so much under review and revision, and I do not suggest that the situation may not sooner or later change. I believe that the Monopolies Commission has been very concerned over some aspects of professional practice, and there are problems in relating the laws that allow Architecture, Medecine and some others to be operated as closed shops, to those that relate to monopolies and restrictive practices. One thing however is certain: within any definable area of skill and expertise the practitioners will sooner or later get together to agree on fair practices, on standards of acceptance for initiates, and on rates of payment.

As a professional, the designer is hardly in a position to insist on a closed shop situation, unlike the doctor, the architect, the structural engineer, though of course it is still possible to diagnose and treat, to construct and build, so long as you do not describe yourself as a qualified practitioner. But I do not think that it has ever seriously been proposed that only legally registered designers should be allowed to practice, and many designers would agree that even were this feasible it would be undesirable and would think that the creative profession that closed its practice and excluded any external stimulus could become dangerously inbred - the experience of architects since they achieved closed shop shows little to alter this view. The challenge in the case of design is that it covers such a wide range of special skills, demands varied expertise and experience, and the area of shared or common values is limited. The Society of Industrial Artists and Designers comprises five main groupings - Product Design, Fashion and Textiles, Inscape, Graphics, Design Administration and Education: in all groupings a total of 37 identified skills. Many of these have unique traditions of practice and marketing. Textile design, for example, traditionally has been sold by taking bulging portfolios to manufacturers on a speculative basis - a procedure that would be deplored by most other designers. Such well-established, eccentric and antiquated practices cannot be broken down and replaced overnight; they need to be adjusted to more acceptable procedures at a realistic pace.

flexibility

Adherence, then, to a professional body is largely a question of idealism, goodwill, good sense and enlightened self-interest, rather than legislation, sanctions and other pressures. And who will claim that a professional association is the weaker for that? Such a comprehensive basis of membership does mean that codes of practice and conduct must be kept broad and reasonably flexible, and they will need to be subjected to periodic review and updating. Some problems are unique to our field; for instance, many architects practice as designers, and many designers have trained or registered as architects. But architects understandably are subject to a much narrower and more restrictive code than are designers, and the architect/designer must decide how he adjusts to this situation. A related but different

problem is that of publicity, advertising ones services, either forbidden or strictly controlled in the case of the architect. But what of the designer who makes his living by designing for advertising? Is he tacitly to agree that advertising is an activity to be deplored? that he himself is the doctor who regards his own prescriptions as unethical?

responsibilities of the designer

What I have so far tried to do is to outline the nature of professionalism for the design practitioner, and to suggest how it differs from other areas of broadly recognised professionalism. It is now time to examine the various responsibilities of the designer. These professional responsibilities fall into three groupings: the designer's responsibility to himself, to his profession and to society at large, which will include clients and consumers. Each area contains many problems which the young designer must learn to evaluate. These problems cannot always be solved on the drawing board:

1. First of all, the designer's responsibility to himself. He must operate on an economic basis, he must not allow himself to be placed in a position where he is dependent for payment entirely on the goodwill of his client or employer, where his terms of commission or engagement are not clearly stated in writing, where such factors as ownership of copyright have not been agreed, or where he is legally and financially responsible to his client for the probity and performance of contractors and sub-contractors without adequate safeguards. Or vice versa, responsible to contractors for his clients probity. Let me illustrate. I can remember a case when a young designer, commissioned to design a house style for a fairly large undertaking, including all stationery, had undertaken to handle the print production by himself commissioning the printers. But careful specification does not always rule out the possibilities or error, and the young designer can only too easily find himself landed with a huge stock of unusable stationery for which his client refuses to pay, but for which he is still responsible financially to the printer. The young designer, whether employed, self-employed or member of a partnership, needs to understand exactly why and how he can make a living out of the exercise of his skill. Taxation, for instance, can be a terrifying mystery, and I believe that no professional student should leave college without having been given general advice about his probable tax position - whether he should, God help him, try to deal himself with his tax problems, whether he can call on the services of an accountant or tax specialist, whether he should operate as a company or a partnership or what his rights are as an employed designer. The employed top designer has his own problems; can he be required or expected to promote campaigns and objectives which offend his own religious or political beliefs? How often can he opt out of projects in the need for which he has little belief, and if he is so sceptical has he the right to seek employment in that particular field? I point to the problems here - I do not offer you any solutions (though I have ideas about them).

2. Secondly, the designers responsibility to his profession and professional colleagues; can he to a client or potential client and say to him -

"I can do the same job as that your present designer does at a much lower fee?" Or may he tell the client that his present design service is indifferent, that he can offer better? Or may he, at his client's request, plagiarize the work of another and possibly more expensive designer? There are obviously ethical answers to these questions when reduced to simple situations, but there are many involved and borderline cases when the professional response is not so clear, and the designer must give careful consideration to his response.

3. Lastly, though it is the most important, the designer's responsibility to the consumer, the public, to society at large. The use of substitute materials, the lowering of standards in the interests of cheapness and popular consumer acceptance, this opens up a wide area for consideration. In this wide field I do not for a moment suggest that there is an easily applied yardstick, or that professional organisation will instantly solve all such ethical dilemmas. I think it is often possible to draw up a good case for what used to be called built-in obsolescence as a production factor, and an equally convincing-sounding case against it. In the end it must be the individual designer's personal judgement that will rightly decide his acceptance or rejection of such a factor. What is important, and what we can do, is to ensure that he first realises all the implications; that he does bring his judgement to bear on them, and that he does not stumble into any situation through ignorance nor acceptance of an "Ours not to reason why" attitude.

industrial security

There is another and often forgotten aspect of professional responsibility that can affect the designer - the matter of professional confidence and industrial security. If, as we believe, the designer should be involved in any project at the earliest planning stages where new products or campaigns are concerned - and if he does not he is only working as an operative, a bench hand, a finisher of other people's conceptions - he will inevitably know a great deal about his clients' plans and strategies. In a competitive economy there will be other industrialists and businesses also interested in these. There may even be something of an industrial espionage system at work, often through contractors and their representatives. The designer who cannot keep his clients' confidence for any reason is a real hazard and may risk the success of his business. The need for discretion, the avoidance of the careless word or the layout left on public view is essential where, for example, an advertising campaign is being planned to launch a new product. It would be disastrous if rival manufacturers came to hear of it and rushed out a new spoiler brand of their own. Clearly the same situation could arise in industrial and product design, in textile and fashion design. Discretion can be a design factor.

technical knowledge

What I have been saying relates to the professional conduct aspects of design practice and is capable of considerable expansion. But professionalism does not consist solely of ethical considerations and correct postures. A doctor or lawyer may be unassailable in this sense but may still give less than satisfactory service through not knowing his job sufficiently well in a technical sense, in failing to be aware of precedents, or new developments and discoveries, in his particular field. The Society of Industrial Artists and

Designers works on the assumption that technical know-how is an essential and major facet of professionalism, that design solutions must be conceived in terms of the available production or reproduction techniques, and that it is an essential part of the designer's function, and of his responsibility to his client, to be aware of these. Let me illustrate again. I have heard it said to graphic design students -"Don't worry about reproduction; today whatever you can put on canvas or paper can be reproduced, so just go ahead and express yourselves." This I regard as thoroughly and inexcusably bad advice. For of course, techniques of reproduction in print are directly related to quantities and costs. At one extreme, silk screen is able to handle short runs and editions most economically; at the other web-offset or gravure can deal with immense runs - into the millions - most economically. But neither process can face the others demands either economically or practically. Design treatment and the preparation of artwork need to be quite different for the two processes. I have in my own industrial experience had to arrange many meetings between national newspaper and periodical publishers and advertisers to apportion blame and financial recompense for bad reproduction, knowing well that more understanding of the limitations of process on the part of the designers, plus less mystery about it on the part of printers and publishers could have made many of these inquests unnecessary. I could elaborate at length on this theme, but I think that I have defined the issue enough - that if you employ the services of a professional designer you must expect him to be honest, but equally you will expect him to be entirely competent, to be neither something of a rogue nor something of a fool.

breadth of knowledge

How wide should the designers area of involvement be? The designer who claims to be concerned only with the act of visual creation and indifferent to all other considerations is becoming obsolete. Many successfully practising designers will tell you that the really creative, idea-formulating element in their work may at most not exceed 10 or 20% of their total load; that research, administration, consultations and testing, costings and a hundred other considerations take up most of the time spent on any major project. It is true that there was a time when many artists with broad academic training and ambititions could pick up useful money by undertaking advertising illustration and certain other sorts of artwork purely as casual labour, much as a serious actor may still do the occasional TV commercial. But today the visualizer in advertising needs to know a good deal about all aspects of retail marketing, about the other skills that make up the advertising team, about his clients'business and the competititon that it faces, about his own agency or employer and the financial stability and prospects. Again this is true of other areas beside advertising. Any end product directed to a consumer market requires in the designer an understanding of consumer needs and consumer attitudes.

education for breadth of knowledge

How then to achieve this broader, more comprehensive approach in the education of the designer? Two possible approaches suggest themselves - either to widen, to liberalise existing design courses, or to set up new, composite or multi-skill courses. This is not saying the same thing in two different ways;

the differences are I believe profound. The end product of the former is essentially a designer, but one who from his specialist standpoint can appreciate the many facets of his work that demand other than purely visual or tactile skills. The multi-skill course aims to produce a new breed with a new standpoint, a hybrid neither basically a designer or a manager. The idea of such composite courses we know has become popular recently at a number of educational levels. Certainly universities and polytechnics have put forward a number, perhaps in an expansionist or competitive mood, and where academic and general studies are concerned such courses may have a real value and meet a real need. But it is misleading to generalise from the academic scene and to apply the deductions to a craft or skill which defines its own limitations. While a melange of classical studies which may indirectly inculcate balance, reason, logic, fluency, and above all style, may be of great value educationally, particularly for those intelligent young people who nevertheless have no clear settled idea of what career they will ultimately pursue, we are concerned with careers focussed on a central skill, and however little in practice that skill will be exercised, it must still be the justification, the raison d'etre for the course.

Better it seems to me to liberalise the design student than to synthesize a sort of multi-specialist. I have in mind how seldom the art or design student ends up by practising professionaly in the precise skill in which he trained. Old techniques become outmoded, are made obsolete by newer techniques and disappear; but the essential design sensitivity and awareness is durable, adaptable and adjustable to the newer approaches. So in spite of the temptation to run up new composite courses from the many sources available, say, within a polytechnic or a technical complex, I myself would rather see those resources used to enrich and widen restructured traditional or orthodox courses, for I believe that the danger of multi-skill courses lies in the opportunities that they offer for dilettantism, for choosing the attractive and easily assimilated elements and for skipping the tougher involvements which may offer precisely those problems from which the professional student should be learning most. I also believe that perceptive students themselves are in the end more appreciative of the course that stretches them by offering in-depth studies in a defined area, supported as these may be by complementary studies, and that the glib omniscience of the Sunday Supplement culture is eventually seen through. So in looking for a broader concept of design education I am still seeing it as being built around a well-defined area of skill studied and practised in depth.

I must not forget one very important characteristic of professionalism - the skill that comes from constant use of the tools of the trade. This may seem to be too obvious an aspect to deserve comment - how can you be a good furniture designer, say, without this understanding? But many students have joined senior courses from foundation studies hardly able to recognise a ruling pen or T square, unable to lay an even wash, incapable of a line of tolerable lettering, barely able to paste down and mount their work in a presentable form. 'Letraset' and the polaroid camera have not yet entirely replaced typographic skills and the sketch book, and the attitude that because

today tools and techniques are replaced more rapidly than in the past they can therefore be disregarded as irrelevant and an invitation to students to avoid essential disciplines. I have said that the better students are soon aware of such shortcomings and are sometimes quite absurdly grateful to anyone who will show them how to use such basic tools and materials in a workmanlike way, even during the final year of a DipAD course. I would like to think that one result of encouraging sandwich courses will be to encounter problems on the shop floor or in the drawing office and to learn some of the tricks of the trade which are not to be despised any more than regarded as of first importance. It may be relevant to summarise by quoting from an editorial I wrote for 'The Designer' in February, entitled The Tehoretical Chimneysweep.

> "If you read enough gourmet columns and good food guides you may never get round to breaking an egg, much less cooking it. Such apprehensions arise from surveying the design education scene and noting the proliferation of fringe courses. To voice them is to risk being accused of anti-intellectualism and retrogressive attitudes, and worse. But this is altogether too simple an analysis. What the SIAD must be concerned about is surely a rational and productive balance between practice and theory in the teaching of design, knowing that it is only too easy to display an impressive top hamper of theoretical studies insufficiently ballasted at the practical levels."

SIAD and professional design education

I should say something now about my Society's involvement with professional design education. We have always been deeply interested in this, and rather more than ten years ago we felt that DipAD in design areas, to the planning of which many of our Fellows and Members had contributed, met so many of our general requirements that we might make admission to the Society at Licentiate level available to Diploma holders on graduating, rather than insisting on three years in practice plus the approval of an examining panel that is the orthodox way into Licentiateship. Very soon a few non DipAD senior design centres asked that similar facilities might be made available to advanced vocational students. Since vocational awards and standards could vary widely from region to region it was decided that such centres should first be visited by a practising assessor appointed by the Society. If he thought that standards and facilities measured up to professional education needs the course should be recognised by the SIAD. This would allow qualifying students to submit for LSIA assessment, providing they held five O levels or an equivalent in general education, were not less than 21 years of age on qualifying, and had spent four years in full-time art or design education. Subsequently the age limitation was dropped, and I think we have shown at least the same degree of discretion in accepting the exceptional but under-qualified-academically-student that the NCDAD has exercised for DipAD.

Our professional assessment follows the academic assessment for the terminal award, and we do not consider students who fail this. Practising Fellows and Members of the Society are appointed and briefed as assessors to appropriate

specialist courses. They are required to complete a written assessment for each candidate in which 50% weighting is given for creativity and design skill and 50% for professional and technical knowledge. It is essential to pass in both sections. The assessor is expected to spend not less than 20 minutes in personal intereview with each candidate.

The acceptance ratio in 1964 was 52% of candidates; in 1973 it had reached 78% after having been stationary at 75% for several years. The total assessed in 1964 was 27 at three colleges; in 1973 it was over 800 at 66 centres, and this year it will be over 1,000.

What we think is significant - and so does the Gann Report - is that the assessment came to be used by vocational colleges as a national award, although we repeatedly pointed out that we do not sponsor courses, that LSIA is not an academic examination, and that to advertise LSIA courses as such could not be encouraged by the Society. But there is no doubt that the need existed, and exists, for a professionally based national qualification, and a number of bodies, including some Departments and the British Museum, have listed LSIA as one requirement in advertising design posts.

In passing, I think we may also have proved that it does not necessarily require an extensive and expensive organisation to operate a successful assessment scheme on a national scale if it is able to call on the services of a comprehensive professional membership. SIAD assessors receive fees at the same daily rate as that for DipAD assessors. I should add that although LSIA assessment has been concerned only with fully professional levels, we have considered that the pressures of demand may lead us to review both the existing schemes and to examine the possibility of offering some form of intermediate qualification which while not in itself amounting to professional admission, could become an important step in that direction. But obviously what we may do will need to be in the light of the Gann Report.

I must refer now with some trepidation to a trend in professional attitudes to design courses. In recent years there has been a growing appreciation of the potential for design studies at various levels, and this perhaps has led to a number of bodies with specialist design interests offering professional qualifications to students in their specific fields. Reasonable as this may be, there are dangers for the young designer leaving college in identifying exclusively and prematurely with too narrow a discipline. Few designers spend a lifetime exercising only the skills on which they cut their creative teeth, and suffixes that denote a strictly limited expertise may look well on a letterhead or in a prospectus, but can be inhibiting in practice. As education officer of a large professional organisation, I know I might be accused of having a dog-in-the-manger attitude but nevertheless, from the young designers' angle the priority is surely the qualification that denotes design skills in general, which may well be followed in due course by suffixes denoting initiation into more circumscribed skills. Through those international bodies, ICSID and ICOGRADA we know that the SIAD is the only major professional organisation of designers that covers the whole

spectrum of design, and this is regarded as a remarkable achievement by designers overseas. Somehow the recurrent temptation to fragment has been resisted with the result that we are, we believe, the only body with any claim to speak for the profession as a whole. It would be inappropriate on this occasion to pursue this in greater depth, but I raise it because I believe that proliferation of available qualifications at student-leaver stage could not only obscure the comprehensive nature of SIAD Licentiateship, but could eventually lead to a divided and weakened profession.

integration of the professional element in education

A final point on the introduction of professional practice into the design course. I think it will be accepted generally that it should be integrated with practical exercises rather than regarded as a final topping to the course. Most learning projects can include some aspects of professionalism, starting with careful attention to briefing and the need to identify the problems before attempting any solution. I believe that no college, no lecturer, need feel concerned that to introduce the student to the realities of professional practice is to inhibit creativity, inspiration, soul - call it what you will. I also believe that today there is as much design talent in this country as anywhere else in Europe. But frequent contacts with continental designers have convinced me that they are so often ahead of us in understanding their market, they are often more realistic business men, better equipped to meet the client on his own ground, if only by speaking his language, in every sense, without surrendering their own expert status. Perhaps as a nation we still suffer from that ingrowing belief that when it comes to the creative arts a British birth certificate is to be regarded as Nature's handicap. We really do not need to; and the young designer who fully understands the nature of professionalism and professional practice is the designer who is least likely to under-value, under-exploit and under-sell his own creative skills."

Discussion Arising

intermediate qualification

Most of the discussion following Mr. Holland's talk centred around the concept of the intermediate two year qualification which was recommended in the Gann Report. First, Mr. Howard was asked how the SIAD viewed this proposal. He replied that although the SIAD stipulated a four year course as necessary for the achievement of a professional qualification, it did accept the case for a more junior level qualification, which would not be professional but which might form a step towards a professional qualification.

The underlying concept behind the suggestion of this interim qualification was that all non-DipAD students would require a period after leaving school to acquire basic skills. At present a variety of courses existed to fulfil this need: foundation courses, some vocational courses and GCE 'A' level courses in schools. It was thought that the two year stage might be a flexible sifting point. The people wishing to do a four year vocational course would first take the two year qualification which would form the first part of the four year course. This proposal would give more standardisation than the

courses at present avilable. The merit of the proposal lay in the flexibility it offered students in the choice of options available at 18. Students who had completed their first two years could either leave and enter employment, continue with the third and fourth years of the 'Gann' course, or treat their first two years' training as a foundation course and join the first year of a DipAD course. Alternatively, students who had completed the first year of a Dip AD course could join the second or third year of a 'Gann' course. The decision should be based purely on their wishes and suitability.

mixed abilities

A participant commented that the course would create difficulties for the colleges due to the mixed abilities of the students in the early years of the course. He replied that it would be possible for the course to be run in parallel for two sets of students - those who intended to leave after the second year and those who wished to stay on and take a four year course.

1st & 2nd class students

Surely, a member suggested, this would create two classes of students, to the detriment of those taking only the shorter course. Mr. Holland felt that there was no need for this to happen. Many of the students on the shorter course would not be less worthy than the others but simply entering careers such as retailing where the design knowledge needed was not quite so great as in other fields. Another member showed concern about the fact that the 'Gann' four year course might be a 'second class' course in relation to the DipAD in terms of staff and resources. Mr. Holland commented that this might, unfortunately, turn out to be the case while the present grant system which gave mandatory awards for some courses and only discretionary awards for others, was in existence.

F Howard,
Lecturer,
Complementary
Studies,
Jacob Kramer
College,
Leeds

THE PLACE OF COMPLEMENTARY STUDIES

"The fact that it is necessary to introduce complementary studies and discuss its place in the college curriculum is, to some extent, an admission of failure. There has been time to solve any initial teething troubles and if, by now, complementary studies is creating more problems than it is solving, then perhaps it might be argued that it should be abandoned.

Although complementary studies is successfuly established at Jacob Kramer College, I have to admit that I feel the fact that such a course needs to be introduced into the British educational system at all is symptomatic of a defect in the educational system itself - a lack of liberality. To draw an analogy, it is rather like giving a cancer patient an aspirin to cure his headache - it may alleviate a degree of discomfort but might also cause further complications, and, in any case, is no real cure. I would like to see the time come when the importance of liberal studies is acknowledged to the extent that it would exist without being specifically timetabled. To some degree, this is the aim at Jacob Kramer College. While we still retain the name complementary studies activities have infiltrated into the content of departmental work, so gradually those staff involved in complementary studies cease to be seen as outsiders.

support

I joined the staff at Jacob Kramer College in 1966 to organise the complementary studies. I quickly became convinced that, like the fairy godmother, complementary studies cannot exist unless it is firmly believed it. It must be supported not only by the staff involved in teaching it, but by the Principal (and, now the Academic Board). Strength from the top is essential. While a department with plenty of staff students and equipment can probably function successfully without support from the Principal, complementary studies cannot. No student attends a college specifically to follow a complementary studies course, unlike those offered by other departments. Therefore the staff in the complementary studies department have a more nebulous purpose than those in other departments, and are consequently vulnerable. Without clear encouragement and recognition of their worth by the other staff, particularly those who head the hierarchy, they will not succeed.

objectives

Once trust was established, the objectives of the complementary studies programme were decided, in discussion between the Principal and myself:

(1) To bring students together breaking down departmental barriers, and barriers between foundation course students and vocational course students, bringing them to a realisation of their common ground. This was fairly easily achieved by presenting a large choice of projects, say 50. The natural process of selection of the ones which interested them most resulted in mixed groups being formed.

(2) To get away from the concept that complementary studies is an academic pursuit taking place in a classroom where the lecturer delivers and the students passively receive and regurgitate matter in some form of assessable presentation.

(3) To provide students with an element of choice in their complementary studies, which takes only 15% of their total college programme. We decided that it was better to offer students concentrated courses in a few topics of their choice than to expose them in a superficial way to, say, 100 different items.

(4) To actively involve as many staff as possible, from all parts of the college. This was a fairly radical departure from normal liberal studies practice. There were four staff employed specifically for complementary studies, including myself. In addition, about 35 full time staff and another 25-30 part time staff became involved. They provided a wealth of skills and interests, often unrelated to the subjects in which they normally lectured. Moreover, I was allowed to involve a wide range of people who were not employed by the college, and occasionally was able to offer them a small fee, although they more usually were willing to give their assistance without payment. They included experts in various fields, for whose information one would normally pay a great deal, and young people, who had recently left college, rich in ideas but without experience and often lacking the ability to put their ideas into practice. It often became difficult to identify the person who was actually the teacher in complementary study groups. In fact, the students sometimes became the teachers. I would even argue that the staff played the role of student more than the students themselves. Teachers, after all, have more experience and more sophistication in learning (i.e. being students) than do the students.

(5) To revamp the history of art course.

(6) To develop a scheme to give complementary studies to part time students. We were fortunate in having a former English teacher among us and so decided to offer GCE work in English for those students who wished to take it. Many students opted to do this and those who passed found the Dip.AD course open to them. The onus, however, was on the student to decide that he wanted to do the course - we did not pressurize students into it and we did not wish the complementary studies department to be regarded as a GCE department.

Once the brief was decided, I was given a free hand to decide how to make complementary studies work. The first discovery we made was that it was disastrous to try to teach complementary studies on a 'two hours per week'

basis - it put great strain on the staff and the students had no time to get deeply interested in the activities, and quickly lost interest. Therefore after a year students were released for a whole week each term to do a complementary studies project. The projects we offered were those which suited our particular staff and students - a list of projects offered in summer 1974 is given at the end of this paper. The choice of topics which might be offered would naturally vary from college to college for what suits one set of circumstances is unlikely to be applicable to another. The history of art course continued for some time on normal 1½ hours per week basis and I was allowed to organise tutorials for students doing GCE work in their normal course time taking not more than three hours per week.

initial experiences

In the first year of the week long projects, about 50 were organised, - about a third of them ended with us feeling some sense of achievement - the rest, so far as the stated objectives of the educational system were concerned, were failures. However, I am optimistic enough to believe that provided the students are working, even failures have saving graces, and the third of the courses which did succeed convinced us that we had the right approach. Disappointing as the failures were, they are probably inevitable when trying to teach something which is not quantifiable - there is always the risk that students will not respond, but the only way to find out is to try it.

staff

We were concerned with giving our students the keys to the nebulous kingdom of ideas, attitudes and relationships. I was helped by the fact that I was an American, unfettered by preconceived and crystallised ideas about English education, although it was inevitable that some of our methods should become fairly firmly set. It was important that our staff should not be experts in particular subjects nor trained specifically to teach complementary subjects but be prepared to do anything. They had to be people who were prepared to ignore regulations concerning such matters as contact hours - we had limited resources and would never have got started if we had been concerned about strict adherence to regulations. Above all, the staff had to believe in the importance of complementary studies. Naturally, there were some staff in the college who did not support our activities, and my real objective was not to defeat them but to win them over - to persuade them that we were doing nothing to which any objection was warranted.

method

The key to our method was to apply the normal studio approach to complementary studies. While traditional classroom methods may suit some activities and some students, they are not necessarily those most suitable in an art college. Just as in the studio, time and space can be freely blocked according to the activity concerned (if a film has to be developed the dark room is used) so we used our whole environment, rather than just the classroom. When we discussed, for example, racial problems, we went into an area of Leeds with a large proportion of immigrants and spoke to them. It was a great advantage therefore to have freedom from a timetable and students committed to a project for a whole week. Yet it can be a battle to persuade many lecturers who teach complementary studies to adopt a studio approach, for often they are academics who feel more secure with the traditional classroom method.

politics and status

Complementary studies is too vulnerable to be subject to departmental politics. Although it has to be run as a department for administrative purposes, it is too amorphous to have obvious power - if it does, the Head of Department becomes too conscious of status and elements of complementary studies are endangered. If no status is attached to the department, it may well paradoxically have more power, although in certain local authorities I know it is necessary to have high-sounding titles in order to attract resources. However, I am happy that in my own case, although I had the responsibility of a department I was not designated Head of Department. I also believe that if the person running the complementary studies department is a highly graded departmental head he might come to concentrate overmuch on the students on higher level courses to the detriment of the part time vocational course students. Moreover, involvement in managerial and administrative responsibilities such as service on the Academic Board, reduced the time available for concentrating on the students and the curriculum.

Yet, at the same time, the member of staff in charge of complementary studies must be given autonomy and not be subjected to interference from more senior staff. The best way to achieve this is to create an atmosphere of mutual respect with colleagues in other departments.

problems encountered

Naturally, we encountered certain difficulties in the development of complementary studies:

(1) We had to convince the students to use their choice of options well - this meant that we had to 'sell' the projects in the brief decription we gave of them. After the first year, students tended to select projects according to how well they related to the staff running them.

(2) Creating an informal atmosphere was an initial problem. We wanted the students to think again about what a teacher was, in order to relieve us of the expectation that we would give out a package of knowledge and they would receive it passively. One of the ways we used to break down pre-conceived ideas was to use our first names, thus making the relationship different from that which the students had experienced in school.

(3) The intangible nature of some of the projects seemed a slight difficulty initially - it was impossible to explain what some projects would lead to - they were simply about living together and working together as a group for a week.

(4) Assessment - we decided that it was impossible to assess the projects - that one could not measure what a student had achieved in a mixed group working together for a week. It is the experience of the project and the effect it has upon students' other work that is important - not what we, as complementary studies teachers, think of the students. Therefore we decided that it was enough to report to a students' department whether or not the student attended and left it up to them to decide on follow-up action.

(6) The problem of getting staff in other departments to take more advantage of the facilities we offer. This proved to be solved most easily by encouraging their interest and involvement in projects - once they were able to participate, they were more enthusiastic about other projects. In one case, for example, we offered a keen golfer the opportunity to run a project on golf, and, having done this, he came to believe in the value of our work.

(7) We developed the history of art course into a sight and sound intensive information period, run by an artist rather than an expert in the history of art. After the first few weeks attendance ceased to be obligatory. Instead, we tried to make the course so interesting that students wanted to come - in fact, attendance figures were an improvement on figures when the course was compulsory. Initially, the traditional timetabled lecture period was retained but now the students choose when they wish to come, and therefore use the history of art room as they would any other studio facility.

The problem which remains now is not what to do but how to do everything we want - there simply is not enough time available to us to give the student everything we wish him to have. Many colleges, I know, would baulk at the idea of students spending a whole week a term on complementary studies. I think that there must be something seriously wrong with teaching in other departments at colleges where this is the case. No student can be expected to absorb everything his department offers in any case, and it should be open to him to select from as wide a range of experiences as an educational institution can possibly give."

Discussion Arising

Mr. Howard was asked whether he thought that at Jacob Kramer College he was creating a situation, in his provision of complementary studies, any different from that in a university where a student may involve himself in clubs and societies offering a wide range of activities. He replied that he believed that there was a purpose - that complementary studies had an educational rather than purely recreational aim. The objectives of the week projects were therefore carefully considered and they were run by people enthusiastic enough to fire a keen attitude in others. Moreover, the activity was probably more intensive and more short-lived than it would be if a student followed the same activity in a society.

Was it desirable that a project should be related in some way to a student's other work? Mr. Howard said that while this was desirable in some cases, at other times there would be no connection. He again emphasised that it would be preferable if complementary studies were completely integrated with the rest of college work.

On the question of finance, Mr. Howard was asked whether students contributed to the cost of their projects. He replied that they were often asked to pay for such items as transport and accommodation, because the funds were limited. Unfortunately, this meant that the poorer students were penalised and he would like to see a system in which hostel fees etc. could be paid by the college.

APPENDIX

Complementary Studies Projects - Summer Term 1974

1. Fungi - collecting and photographing local fungi.

2. Energy - a look at this most topical of all problems - from the use of solar power to the more old fashioned ways of solving our need to use resources properly. There should be opportunities to build simple machines and devices to test methods ordinary people might employ to create energy. A close look also, at the ways in which we misuse energy.

3. Stones on Baildon Moor - a follow up to the previous year's Ilkley Moor Project which surveyed the "cup and ring" marked megalithic stones found there. Hopefully it will be possible to ascertain some meaning from the markings through field work and studio activities. It might be necessary to stay at an adjacent caravan park in order to complete the survey photographic work and make plaster casts of certain examples to be used later in producing glass fibre models of each stone. An analysis of the location aspect and sites of the stone and their marks will be made so as to discover relationships one to another and the environment. All the information will be used in reconstructing the whole area in a 3-D model of the moor. Reference to the astronomical, geological, ecological and climatic conditions of the megalithic period will be essential.

4. Dig-In - a few people are required to help dig and plant allotments on Woodhouse Moor for old age pensioners.

5. And Now For Something Completely Similar - the making of a short TV comedy show in the style of "Monty Python". People involved must be prepared to attend preliminary planning sessions, to work outside normal hours and places. Editing and producing a sound track will have to be done after the week.

6. Hadrian's Wall - The Roman Wall from Wallsend to Bowness must have been one of the engineering wonders of the ancient world - and a good part of it stands today as a silent reminder of the might of the Roman Empire. The plan is to follow it for its entire length, and take time to discover some of the well-preserved remains of camps and mile forts. Food and transport costs will amount to about £7.

7. Paper - the project is as simple as it sounds - making paper. The work will be done in the complementary studies studio, using materials readily to hand.

8. Climbing in the Lake District - a week in the Lakes learning about rock climbing and camping, under expert instruction. Cost about £6. for food and transport.

9. The Small World About Us - a week to make a wild life film using small animal life in Leeds: cats, dogs, mice, shrews, squirrels - even foxes. Interest in animals is essential - the film is simply a tool for collecting experiences.

K.A. Strand,
Deputy Chief
Officer, NCDAD.

VALIDATION OF COURSES AND ASSESSMENT METHODS

"I feel myself at some slight disadvantage in having as my twin subjects what might be thought rather arid topics, but I believe that they are important issues which touch on some of the things that art and design education is really all about: the discovery and development of talent and the evaluation and maintenance of standards of excellence.

I should perhaps preface my remarks with the usual cautionary note to the effect that they represent my own views and not necessarily those of my Council - from which, however, I hope they will not diverge too wildly. I say 'my Council' meaning of course the NCDAD. If the merger with the CNAA is confirmed, it may be that some variations in practice will be adopted; I shall refer to these later.

I shall first say something about NCDAD procedures for the validation of courses and the assessment of students, but with the emphasis perhaps less upon the actual practice that upon the principles underlying it. I am not for a moment supposing that the procedures themselves would automatically be valid for vocational courses, but perhaps the principles may have some relevance.

NCDAD

We have come a long way in the past ten years or so. When in 1961 the NCDAD was originally set up as a result of the first Coldstream Report, it was charged with the task, as an independent body, of validating the new Dip AD courses and of evaluating the capability of colleges to conduct them. This was an important step in moving away from direct DES control. The second innovation was just as significant - the placing of the prime responsibility for the assessment of students on completion of their courses firmly with the colleges themselves. These two developments, together with the stress laid upon the participation of practising artists and designers in validation, teaching and assessment have had far-reaching effects, and not only upon Dip AD: from my own experience I know that vocational courses too have gained a great deal.

college responsibility

I am sure that when the NCDAD first went about its task there were many disappointed colleges. But at least new standards were set, and it is noteworthy how many colleges later rose to the challenge and were successful in reaching those standards. I cannot too strongly emphasise the fact that the Council has never sought to tell the colleges what they ought to do or how they should do it; its purpose has been (to quote from its First Report of 1964) 'not to impose any predetermined pattern, but to test the ability of colleges to evolve their own standards.' In other words, the onus is clearly upon each college to initiate, to formulate, to propose and to present its own ideas and objectives and the

ways in which it will seek to realise them. It must then show itself capable of maintaining the standards it has set and of assessing the ability of its students to achieve those standards. This initiative and acceptance of responsibility by the colleges has had the effect of ensuring variety as between courses. There is no 'standard' course: no two courses in any area of study are alike. And this, I believe, is as it should be: it is one of the strengths of British art and design education.

RACs & RSIs

Validation of Courses

The first part of the total process of validation rests with the Regional Advisory Councils and the Regional Staff Inspectors. I will touch on them only to say that they are concerned with broadly administrative and financial factors. Under current arrangements they must first approve course proposals on these grounds before the proposals are passed to the NCDAD for consideration on academic grounds. It is with this second part of the process that I am concerned today.

procedure

Simply stated, the Council's procedures are as follows: a written submission from the college; a visit to the college by a visiting board of the Council; a written report from the board to the Council; a formal letter communicating the Council's decision to the college; and an opportunity for representatives of the college to discuss aspects of the report with the Council's officers.

written submission

The written course proposal is scrutinised very carefully by the members of the visiting board to whom it is circulated before a visit takes place. The college is required to give information about its government and academic structure; its staffing; accommodation and equipment relevant to the proposed course; and a statement of the aims, structure and syllabus for the course. The submission also includes reference to library facilities, student welfare, advisory committees and (if sandwich course is proposed) details of the arrangements for industrial consultation and industrial placement of students.

Important as the written submission is from the Council's point of view, it is perhaps even more important from that of the college; not in itself so much as for the process of thinking out, discussion and formulation which has preceded it and which has involved individual staff members, departmental boards of studies and the college academic board. This exercise is a real test of the college leadership, team spirit and ability to plan coherently and imaginatively.

visiting board

The members of the visiting board are selected and briefed with care. They are all, normally, members of the panel or panels in whose areas of interest the course falls. (I say 'normally' because special circumstances may occasionally arise when it is necessary to co-opt an additional outside specialist for a particular purpose.) Every aspect of the course must be adequately covered by the board's membership. This includes, of course, Complementary Studies and the History of Art and of Design.

It is the Council's practice always to include one or more independent specialist members. There will also be members who are themselves Dip AD college teaching staff. You might think there are risks in this. But I have always been impressed by the degree of detachment and objectivity which such staff members bring to the task. This is not on reflection surprising: after all, most of them have themselves been at the receiving end, so to speak, and will understand what is involved for the college. The whole aim is to blend a group of individual professionals into a balanced team which will approach its task with objectivity but with a sympathetic understanding of the college's aims and aspirations.

The board needs to remind itself that the college has been preparing for the occasion for many months, even for years, and has done a great deal of hard work and self-searching in the process. The staff at all levels will be on their toes - and indeed, human nature being what it is, probably on edge. Whichever way you look at it, the occasion is something of an ordeal. A great deal may depend upon the outcome. So without being in any way ingratiating or condescending, the visitors must try to put their hosts at their ease, establish a good rapport and a relaxed atmosphere and enable the college to put its best foot forward. There must be no attempt to play staff off against each other, still less students against staff. There must be detailed and frank discussion, in which however members of the board must not express individual opinions which might be taken as being the official views or policy of the Council.

What sort of things does the visiting board look for? The answer can perhaps be summarised as follows: First, there should be a clear and logical philosophy underlying the course proposal; a coherent statement of aims and objectives and of how it is proposed to achieve them. Does the college provide an ambience and an environment, both physical and intellectual, in which advanced art and design studies can be expected to thrive? Next, staffing resources: are the staff a cohesive and balanced team, working in harmony on a fully understood and agreed educational policy, yet are they of sufficient range to ensure that each member can offer his or her own particular contribution to the course teaching, thus bringing variety to it? Are the resources of the college in terms of accommodation, facilities and equipment - library, studios, workshops, communal facilities, and so on - adequate not only for the initial year of the course if approved, but for it to function satisfactory as it develops and the numbers build up over three or perhaps four years? No situation is ever an ideal one; if there are present shortcomings, is it within the power of the college and its local education authority to remedy them within reasonable time? Does the college appreciate its own strengths and weaknesses, and can it exploit the former and rectify or mitigate the latter?

In the case of sandwich courses, the board, while recognising that in many cases the college will be breaking new ground, will wish to have reasonable grounds for confidence that the obligatory sandwich period in industry will materialise, that sufficient industrial places will be available for the students involved, and that the period will be adequately planned and supervised so as to provide a properly integrated educational experience.

In all courses, student welfare and counselling services are a concern of the board; so are the college government and the arrangements for communication and consultation at and between all levels. It may be objected that these are of a largely administrative nature and as such of no concern to the Council. To this I would reply that inasmuch as they have a direct bearing on the creation of a healthy, lively and effective working situation in which standards can be set and maintained, they are a concern of the Council: to that extent and no more.

Depending on a number of factors - distance, availability of key members, the scale and extent of the exercise - the visit itself may occupy a day (always a very full day!) or it may span two days with an overnight stay in between. A frequent comment is that the Council's visits are not long enough. But visits are costly and the time of busy professionals is precious. I know this is not perhaps a complete answer. But the limited time can be planned by mutual agreement between college and board so as to be utilised to maximum advantage by both. It is a curious thing, but I have frequently observed that an extension of the time available tends only to reinforce a favourable or an unfavourable view formed by a board; it seldom effects a dramatic change of opinion.

The mechanics of a visit can be briefly stated. It usually starts with a private meeting of the board at the college, at which the day's work is planned and certain aspects of special interest or concern can be identified for particular attention. Next there is a meeting with the Director or Principal and often one or two senior staff, followed by further dialogue with them and other staff concerned with the course. After this a general tour of all the relevant facilities takes place, and detailed discussions taking place between members of the board and their opposite numbers. This may extend for a large part of the day, punctuated perhaps by a working lunch at which frequently representatives of the governing body, the local authority and local industry are presented. At some point there is often an informal meeting with representatives of the students' union - after all it is the students that the visit is really all about - and there may sometimes be a further collective meeting with the staff. Finally the board meets again in private to exchange impressions and agree its findings and the recommendation it will make to the Council. I emphasise that the board reaches its conclusions on the spot, at the time: I can scarcely recall any instance in which this has not been so. It is a fact, too, that discussion almost invariably produces a consensus view.

Notes are of course taken by the officers of the Council, but the members of the board are asked to send in to the secretariat their individual written comments as soon as possible after the conclusion of the visit. These, together with the notes taken at the time, are collated and form the basis of the report which is written by the officers. The report of the board is agreed by the Council member or members who took part in the visit (I should have mentioned that at least one member of Council is required to be on every visiting board) and is submitted for consideration by Council at its next full meeting.

As I have already said, the Council's decision is communicated to the college authorities by letter from the Chief Officer. It has always been the Council's practice, however, to make the detailed report itself confidential to the Council, although salient points are communicated verbally by the Chief Officer to the Director or Principal. Some of you will know that it is the practice of the CNAA to issue a written report to the college, as well as offering an opportunity for verbal dialogue afterwards. It may well be that of the proposed merger of the two Councils is confirmed the CNAA's practice in this respect will come to be adopted; many people would I think be in favour of this, though there are pro's and con's with both methods.

Another way in which NCDAD practice differs from that of the CNAA is that the latter frequently - indeed I think normally - holds a preliminary meeting or meetings with the college representatives about the written submission before any visit is undertaken. This also has certain advantages and indeed the NCDAD has on some recent occasions done the same. Certain doubtful or unsatisfactory aspects of the submission can be adjusted at this stage, so avoiding a premature and perhaps abortive visit. (I should add perhaps that a submission to the CNAA is scrutinised by the whole of the specialist board concerned with the subject of the course: in the case of the NCDAD the specialist panel as a whole does not become involved, but only those members who form the visiting board. Here again it may be that art and design will have something to gain from adopting CNAA practice.)

officers

I have said something of the role of the visiting board members. What about that of the officers? Normally at least two accompany a visiting board, and the senior officer acts as a kind of chairman for the day - though a strictly neutral and 'low-key' chairman - while his colleague 'clerks' the proceedings. This is in contrast to CNAA procedures, where a member of the Council or of the relevant committee or subject board takes the chair. Either way, the officers' job is to make sure the visit runs smoothly and that liaison is established between the board and the college. They must keep an eye on the agreed programme, too, and make sure that best use is made of the time available, being particularly careful to ensure that the college enables the visitors to see and hear all it wishes to see and hear, and to meet all the people it wishes them to meet. The officers may be called upon to give advice to the board on questions touching upon Council policy and to guide it towards arriving at a just and balanced evaluation, taking all the circumstances into account.

It would I think be true to say that the validation of courses constitutes the most important aspect of the Council's work: certainly it is the most demanding, for members and officers alike. I hope we all undertake it, not in the sense of its being a kind of contest between Council and college, but rather as a collaborative exercise in which both sides strive to achieve the basic aim: to establish standards of quality and to create the conditions in which the people involved in the education process - for it is with people that we are concerned, staff and students alike - can achieve their full potential.

.50

Assessment Methods

I have dealt at some length with the Council's role in validation. Now I must leave myself enough time to say something about the business of assessment. The standard achieved by the students on completion of their course is really the proof of the pudding, as I think you will all agree.

college responsibility

I said at the outset of my talk that a major innovation following from the establishment of the Dip AD was the assumption by the colleges of a far greater degree of responsibility than hitherto for assessing their students' performance. I will not speculate on how long it will be - if ever - before colleges are self-validating in the sense that universities are self-validating. But certainly in the matter of student assessment they have come a long way along the road.

Council's general framework

In brief: the Council lays down some rules for guidance - some general principles for assessment - and requires from each college a submitted scheme of assessment which must be approved by the Council. Within the general framework laid down by the Council there is room for a good deal of variation in practice, taking account of differing conditions in different colleges. (The Council's rules for guidance are contained in its Memorandum No. 2.)

The Council prescribes certain basic things: that there must be a formalised and agreed assessment procedure, understood by staff and students; that there must be internal (ie. college) assessors and external assessors for each chief study, for supporting studies as necessary, and at least one (there are frequently more) for Complementary Studies including the History of Art and Design. The assessors must be familiar with the course content and requirements; they must have some contact with the course at all its stages, and this frequently - increasingly frequently - involves some kind of continuous assessment.

final assessment

Whether a scheme of continuous assessment is adopted or not, the final assessment for the award of the Diploma nearly always embodies some element of marking in respect of work done by the student during the previous years of the course. The Council requires also that the weighting of marks in the final assessment shall normally be in the ratio of 80% for the chief and supporting studies, and 20% for the complementary studies; within the latter, the history of art and design must be given a weighting at least equal to that of all the other complementary studies taken together. Within this framework prescribed by the Council, colleges have a good deal of freedom as to how they arrive at the totals.

external assessors

The external assessors are appointed by the college, though their appointment must be approved by the Council, which incidentally has never allocated a particular assessor to a particular college. Colleges will naturally choose assessors who are in broad sympathy with the philosophy and aims of the course. At the same time their role is to bring independent professional judgement to bear and to act as moderators on the level of awards. I should say here, perhaps, that there are certain differences between NCDAD and CNAA practices.

The CNAA has hitherto been concerned largely with subjects which can be examined formally by final written papers(sometimes oral tests) and marked like most other written examinations. Indeed they use the word 'examiner'. You will have observed that, for different historical reasons, the NCDAD employs the term 'assessors' - because of course art and design attainment is usually judged through scrutiny of examples of practical work, frequently extensive products produced during the course; the written work being mainly in the complementary studies. But as more and more project work is being introduced in other disciplines, so the styles, you might say, of the two Councils are converging. It is true that the CNAA external examiner appears to have a more absolute final authority over the result, whereas it is the moderating function of the NCDAD external assessor which is emphasised. But in each case it is he who signs the final list of awards, thus indicating his agreement with the results, and indeed in most respects the difference between the two Councils is more apparent than real. Certainly disagreements between internal and external assessors in the NCDAD system are very rare indeed, and I should guess that if they do ever occur it is because of some irregularity in the interpretation of the Council's rules.

The chairman of the final board of assessors is responsible for the conduct of the proceedings and is required to arbitrate in any case where a difference of opinion is involved; and because we are (I hope) not all 'yes-men', some differences are bound to occur. It is the responsibility of the final board to resolve these by discussion. Where an impasse is reached the chairman must make the final decision.

It is the business of the final board of assessors to agree the result and the Honours classification in respect of each student. The lists, signed by the chairman of the board and the external assessors, are transmitted to the Council which is responsible for ratifying the results and awarding the Diplomas.

collaboration

I hope I have not seemed to deal too tediously with the mechanice of assessment. They are, as I have said, set out in the Council's Memorandum No. 2. But I have summarised them to try to show that the assessment of Dip AD students' work is a collaborative effort between Council and colleges. The Council constructs a general framework, and awards the Diplomas at the end of the day. The College accepts responsibility - yes, and accountability - for the actual task of assessment, which is all part of the business of setting and maintaining standards of excellence.

creativity and technical skill

A few final points seem worth touching upon. A question which affects vocational courses even more perhaps than Dip AD - though it is important in that field as well - is the relative weightings to be placed upon creativity (if I may use that much misused word) and imagination on the one hand, and technical expertise and professional competence on the other. I know that the two are really interwoven and that any sharp distinction is to some extent an artificial one. But we have all come across students who are stronger in the one aspect than in the other. All one can say is that the degree to which each part of the student's total make-up is taken into account must depand very much upon the aims and nature of the course, particularly perhaps in vocational courses, which cater for a very wide

spectrum of abilities, skills and student needs. I simply mention this topic because it is one which each college must resolve for itself in the light of all the factors. No Council, no amount of legislation, can say precisely how the balance should be struck: it is for the college to make a responsible judgement in the particular situation.

standards

Another question which sometimes arises - and again has relevance for vocational courses - is that of the relationship between standards among the colleges on a national scale. Here I must say that - even supposing it were possible - the Council has never demanded a national norm. To seek to do so would be to run the concomitant risk of arriving at a dull uniformity, a stereotyped product, which would be the antithesis of what art and design education is all about. It is true that some degree of comparability is made possible through the fact that many of the external assessors serve more than one college. But that, too, could have dangers if used too consciously as a regulator. Just as no two courses are alike, and no two sets of circumstances, so standards no doubt vary from college to college, and, within a college, from year to year. So do vintages, and for myself I would prefer it that way if - as I suspect - the alternative were to find oneself drinking everywhere a kind of standard plonk. For it is a sad fact that a too earnest attempt to level standards is apt to result in a levelling down rather than a levelling up. "The arts, like water, will find their level," said Hogarth is a slightly different context. Somehow, through the interaction between Council and colleges, between assessors, teachers and students, the chemistry of fermentation can, I believe, be induced to work. No Council or validating body can impose a standard on colleges. It must be created by and within each college, through the exercise of both collective and individual personal responsibility by all concerned. The Council (or whatever body it may be) can lay down a framework and act as guardian; but the initiative and the responsibility is the college's.

That is why I have not attempted to prescribe a blueprint for the validation and assessment of vocational courses, whatever pattern these may in due course assume. But I hope that what I have said will have pointed to some principles and pose some questions which can be raised in discussion.

Discussion Arising

remedial tactics

What action did the NCDAD take when complaints were received about certain courses?

Mr. Strand said that part of the Council's work was in any case concerned with the re-approval of courses. Initial validation was usually for a five year period, and before approval was renewed there was a review - a sifting of documents and, normally, a visit to the college concerned. If the Council was notified of some detrimental aspect of a course, it would correspond with the college, drawing attention to the complaint, and ask for the college's comments. It might even convene a meeting between the Chief Officer and the college Principal. There were certain sanctions open to the Council: it could at any

time withdraw approval, and on the rare occasions when this had been threatened the necessary remedial action had been taken. Another regulating factor was the external assessor - if he saw a sharp deterioration in standards he would submit a report to the Council, also sending a copy to the college. The process, Mr. Strand emphasised, was a delicate one. The Council did not wish to coerce; it understood the problems that colleges faced, and therefore much remedial action took the form of dialogue alone; and in nearly all cases, good sense prevailed.

staffing

A member then commented that he often heard the complaint that class contact hours were too great. What criteria did the Council use to determine the adequacy of staff numbers? Mr. Strand replied that the NCDAD had no juristriction over the appointment or distribution of staff - this was a matter entirely for the college and the local education authority. The Council had deliberately not laid down any norms for staffing, partly because if there were a dispute it would be difficult to force the hand of the local education authority, but, more importantly, because the NCDAD was aware that circumstances were different in every college. There could be no general statement on how many staff ought to be teaching when the size and nature of colleges varied so much. Therefore the Council looked at each case individually and if it saw a lack of some particular expertise it would say so. It had no powers to compel, though it could withold approval until it was satisfied that the situation had been rectified.

accommodation

Mr. Strand was then asked whether the NCDAD, like the CNAA, insisted that all the accommodation and resources necessary for a course be ready before approval was given? He explained that the NCDAD insisted upon adequate resources and accommodation for the first year of the course, with the assurance that the remainder would be made available later. However, if the Council had any reservations about whether they would materialise it might withold approval until it was satisfied.

subject panels

A participant asked about the role of the members of the NCDAD's subject panels. Mr. Strand said that there were three main aspects to their role: firstly, they had the collective role of advising Council on any matters on which they wished or were asked to give their opinion; secondly, as individual members, they took part as members of visiting boards to colleges; thirdly, they could be appointed as external examiners, though not at colleges where they took part in validation. They had less power than members of the CNAA Subject Boards, for although they gave advice, they could not make decisions, although their recommendations, particularly in reports of visiting boards, were nearly always ratified by the Council.

research

What was the NCDAD's attitude to research? Mr. Strand explained that in the field of art and design it was sometimes difficult to distinguish between research and professional practice. He thought that his Council and the CNAA recognised that although it was not always called research, many staff and postgraduate students engaged in some form of professional practice and the Council was keen that they should. On the question of research into pedagogical matters, although the NCDAD had never sponsored it, as it was not strictly speaking in its terms of reference, it would certainly not wish to discourage it.

PLENARY SESSION

Four people, all involved in different aspects of art and design were received in plenary session. They were then invited to visit syndicate groups to take part in more detailed discussion.

M Goldring, Maurice Goldring Associates

Typography and Related Matters

As I am less involved in the educational process than the other witnesses, I should, perhaps, state my credentials. Apart from being a practicing typographer, I have had experience as a civil servant at the DES, I am a member of the graphics panel of the NCDAD, a Dip AD external assessor, an SIAD external assessor, and am a visiting lecturer at a number of colleges.

My main interest is in the young typographers who emerge from design departments. They are few in number, as typography is still erroneously regarded as the poor relation in the family of graphic design. This means that we are short of competent typographers and consequently suffer from much badly designed print. I find this unacceptable, as typography is concerned with the visual communication of language in the most effective way - and upon which our civilisation largely depends.

It might be useful if I define what I mean by typography. For me, it is the design and organisation of groups of alpha-numeric characters and associated signs and symbols so that the information which these together represent may be communicated in the best way, in the briefest possible form, and with the simplest of means. You will find that the Hungarian composer Bela Bartok uses a similar definition with regard to certain kinds of peasant music.

Typography is an exact discipline. It requires detailed factual knowledge and technical skills together with creative ability. It is mistaken to belittle technical skills because they are, in fact, an aid to creativity and are essential for the concrete realisation of ideas.

I have formed the conclusion that in those design departments which have Dip AD courses and vocational courses running in parallel, using the same facilities, it is easier to become a good typographer on the vocational course as one has less distractions - by this I mean the full bill of cultural fare provided by Dip AD courses. At present, many employers who need typographers feel that they can find better recruits among those students who have followed vocational courses. Yet these students still feel that they are of lower status than those on Dip AD courses.

I share Mr. Sheppard's view that the three years which we allocate for most courses may be excessive. I am certain that the knowledge and skills imparted could be got across on more intensive shorter courses and that students would find this more stimulating. One does not usually talk of productivity with regard to design education. I think that it is time that we did.

In typography, I have the impression that much time is wasted in teaching students outdated methods which bear little relationship to present-day practice. Students should become thoroughly familiar with the mangement and production practices used in industry today. There should also be the fullest co-ordination between design departments and printing schools. It is not enough for students to have creative ability and the wish to express themselves, backed up by smatterings of knowledge on artistic, social, and philosophical matters - and faltering technical skills. They must become thoroughly competent in the use of tools, machines, materials, and processes and have the necessary theoretical knowledge to become successful in the discipline of their choice.

I should like to refer briefly to 'A' levels in so far as I would oppose the introduction of 'A' levels as a mandatory entry requirement. However, I do think that design students should be literate and numerate.

Here, I think that it is worth drawing a distinction between the artist and the designer, not in terms of what they do but in terms of how they do it. The artist conceives and is alone responsible for the realisation of an idea. In contrast, the designer is dependent upon other people for the realisation of an idea and must be able to communicate his or her intentions clearly. If this distinction is acceptable, one should consider the value of general foundation courses. Most students enter design courses with a fine art not a design background. Further, many students - particularly those on Dip AD graphics courses - have opted for design as a second choice, after failing to get on a fine art course. I think that this is a result of many foundation courses still having an unmitigated fine arts bias which ill-serves students on design courses. I should, therefore, favour some separation of the fine art and design elements in foundation courses so that each is recognised in its own right. I should also like to see the time come when much of the material covered in foundation courses is taught at school (both primary and secondary).

Design students have difficulty in appreciating that the designs which they produce for studio projects are not final products. It is often hard for them to accept that such designs are only statements of intent - that a design does not actually exist until it is a real physical object produced under normal industrial conditions. So I am very glad to see courses where students work on real design problems for real clients as now occurs in a number of design departments.

Graphic design students should, upon completing their courses, be able to apply their design abilities to the enormous number of possibilities and problems which are now to be found in the field of visual communitation. However, the opportunities are not always obvious if one goes away from the traditional employment channels of advertising agencies, designers in private

practice, and publishers. For example, one former graphic design student has set up a design unit in the anatomy department of a hospital. Another, a university student who took agriculture as his main option, spent a year on a graphic design course to enable him to present good printed information for the farmers he would be advising in future years.

A recent development in further education which I welcome is the structuring of courses on a modular basis, giving the student the freedom to choose the set of subject-modules which will be most appropriate for his or her needs.

J D St. J. Sheppard,
Head of
Department of
Integrated Design,
Cardiff College
of Art

PHOTOGRAPHY AND FILM

"I attended a 'school of art and crafts' in the days when colleges were small and integrated. I was fortunate in being taught photography by artists rather than by photographers. On leaving I entered industry, and, like so many art teachers, drifted into education via part time teaching. Colleges were by this time growing - there was a sense of empire building which eventually led to the isolation of various subjects to the detriment, I believe, of art education. Photography as a subject tended in any case to be outside the normal activity of the rest of the art college, and had its own interested bodies. Schools and colleges therefore put their photography students through external examinations: CGLI examinations and those of the Institute of British Photographers (now the Institute of Incorporated Photographers), the main validating body for pure photographic courses.

The number of students on photographic courses at present are as follows: In 1973 1,497 full time students were being taught by 189 full time teachers and 150 part time teachers, giving an average student staff ratio of 8:1. The number of students completing courses was 448.

The types of courses offered were:

A. FULL TIME PHOTOGRAPHIC COURSES (two 'A' level entry)

1). Degrees

B. A. in Photographic Arts - Polytechnic of Central London.
B. Sc. in Photographic Sciences - Polytechnic of Central London.

2). IIP Photographic Qualifying Examination
(assessed internally with external moderation)

Birmingham Polytechnic
Derby/Trent Polytechnic complex
Harrow
London College of Printing
Manchester Polytechnic

(This course is also offered on a part time day release basis at the Polytechnic of Central London).

3). Vocational Photographic Courses
(course length, in years, shown in brackets)

Ashton-under-Lyme (2)
Blackpool (3)
Bournemouth (3)
Colchester (2)
Croydon (1 post-graduate)
Ealing (3)
Edinburgh-Napier College (2)
Glasgow (2)
Gloucester (2)
Guildford (3)
Isleworth (1)
Leeds (2)
North East London Polytechnic (3)
Middlesbrough (2)
Newport (2)
Plymouth (2)
Reading (2)
Rochester (3)
Salisbury (3)
Swansea (3)
Wednesbury (3)
Wigan (1)

B. PART TIME COURSES

Aberystwyth (2-3)
Grantham (1)
Hinckley (1)
Paddington (2-3)
Twickenham (1-3)
Royal College of Art - post-graduate (2)

I shall now quote two comments from the Report of the Society of Photographic Education compiled recently. The first is that since their last survey two years ago there has been a significant lack of change in the purely photographic courses offered - there are only 29 centres (plus one offering a post-graduate course) and their general pattern of courses and qualifications is unchanged. The Report goes on to note that the lack of growth in pure photographic courses appears to be reflected in the increased interest in the inter-disciplinary approach where photography is but one form of visual communication. Many colleges surveyed reported that their Dip AD courses were now offering photography or film as optional studies.

Earlier in my teaching career I began to feel uncomfortable about the isolation of photography from other forms of art education and so welcomed the opportunity to move to Cardiff, where photography was part of a design

department and one could work in a broader spectrum. It is therefore encouraging to see that photography is again assuming a respectability in art and design and its true role has been realised. It has been accepted that if a student is aiming at a career in advertising design it will be of most use to him to be in a graphics and communications department. Therefore I tend to think in terms of the photographic designer rather than the photographic technician.

The growth of the three year course is an interesting phenomenon. Some years ago all design courses, whatever the subject, tended to last two years but gradually they have increased to three years duration. I personally question the validity of the need for a three year course to produce a photographer if he is simply to be a technician - someone carrying out instructions rather than interpreting his own ideas. It is interesting to note in this context that the RAF find a 22 week course sufficient. I also question the validity of placing courses in scientific photography, metallurgical photography etc. in photographic departments. The photographic skills such specailists need are narrow and quickly learned. It would be better for these students to learn their subject in the science and metallurgy departments, where they can be taught the necessary information about the subjects they will be photographing.

There is a surfeit of mystique in the teaching of photographic techniques. Anyone, even a child,who is able to read is capable of operating a camera. Moreover, technical difficulties are constantly diminishing as cameras become increasingly automatic. It is the subject of the photograph - what the photographer selects to put in front of his camera which is important, and this visual awareness is best learnt in the design department of an art college where visual education has greater importance than technical information. This, again, leads me to question the value of a three year course in pure photography. I am concerned with post-college flexibility - how many students after all, get employment in the precise area in which they were educated and in which they are led to believe they will succeed?

Many graduates start work as assistants and many job advertisements stipulate that at least two years' experience is required. Many employers do not want young people who have just left college. Personality at interview and an interesting folio of work have traditionally been more important factors in getting employment than degrees and diplomas. Another problem that students face when they leave college is that they prefer to take photographs in a way that will appeal to other photographers, but not necessarily the public for whom their work is intended. The ambition of the majority of students is to work as freelance photo-journalists. Yet the harsh reality is that there are on estimate, less than 20 successful freelance photo-journalists in this country.

Turning to the question of resources for photographic courses, it is true that they are probably the most expensive to run in art colleges and departments, but it must be realised that they do not even approach the cost of, say, engineering courses, which have such high capital costs.

Finally, I must mention the difficulty of getting good electronics technicians to service audio-visual or television departments while they can only be paid on technician salary grades, for, with their expertise, they can command high salaries elsewhere. "

J Mosse,
Architect,
Bath

3D AND ENVIRONMENTAL DESIGN

"I taught over a period of five years at the West of England College of Art and Bristol Polytechnic, as a practising architect rather than as a professional teacher. My approach was probably different from that of the lecturers with an art college background - although quite rightly, there is no clear separation between practice and teaching in colleges of art. This period of teaching was intensely interesting to me. My background was originally in engineering from which I revolted and took up architecture, for the attitude of mind it demanded suited my developing abilities.

Colleges of art have different attitudes to learning and teaching from those which prevail in schools of architecture. I welcomed many of these - the freedom, the increased stress upon pleasure, the relative lack of pressure - but there seemed also to be a number of factors lacking. I tried to fill in some of the gaps, so attempting to improve an already delightful situation.

I was attached to a 3D design department in the college but enjoyed the freedom of working in various faculties. I was struck by the fact that most of the students' efforts were directed towards making objects, rather than setting up situations, which is the pattern in architectural schools. The students also seemed to lack any factual framework in which to work out their designs - there was more 'ad hocery' than hard calculating design. Thirdly, there was, in the free approach, almost a lack of organisation. Fourthly, the students had scant mathematical ability, which cut them off from a whole range of design possibilities. I tried, therefore, to help them to understand something of mathematical concepts, and to develop their skills in using mathematical possibilities in design. Illustrating the problems and results encountered during my period of teaching I shall describe two of a number of programmes I organised: a 3D design structures programme and a space maker programme.

3D Design Structures Programme

The 3D design structures programme was offered not only to 3D design students but also to textile design, ceramics and graphics students. The programme was organised in a fairly open-ended way. Either a "trigger" situation was set which excited activity, or a definite task was set with the ways of achieving it being free. There followed a meeting at which all results of the work the students had done were paraded, discussed and analysed. The next possibility was then illustrated and the cycle repeated, working in one or two day sessions over a three week period. Vast quantities

of fragile work were produced. There was rapid production and equally rapid destruction - the object produced was of no intrinsic value but merely a stepping stone to something else. The key note of the programme was that nothing should be permanent, that experience should be shared and mistakes were to be encouraged. This was a departure from the norm for the students, for in most of their work they had to try to produce the best design they could in their first attempt.

The programme commenced with an analysis of the elements of structure: vertical componenets (tendon, strut, column); horizontal components (corbel, cantilever, lintel, beam); and two way horizontal spanning components (slab, plate, sheet). Students were then invited to consider the composition of more complex elements capable of behaving in the same way as first order elements. Once they had learnt the structural characteristics of the elements the students were given pieces of wood and card and asked to determine for themselves what length:depth ratio each element possessed. They worked in groups and their findings were reported in plenary sessions. Their answers were analysed and a figure for proportions was produced. The next stage was a load-bearing game. The students were asked to create structures in which nothing could be added or subtracted without physical collapse. Then the concept of stability, rather than strength was introduced. Students had to support a horizontal plate so that it would be firm when pressed, withstanding tension, compression and torsion. From stability it was possible to progress to notions of bracing. Taking the programme further, stability based on some solid shape was extended in a crystal growth situation using regular members. Explorations led to an interest in the creation of geometric structures. Quite complex geodisic structures could be produced by students who had no mathematical training but had been introduced to the grammar of structures. Often eloquent designs were produced, and for some students, a 3D world had been entered which would form an influence on the rest of their work.

space maker

The second programme concerned the creation of environmental space. Again, there was a stress on the transcience of the forms produced.

The programme which also resulted in rapid creative/destructive activity, began in a similar way with theory - Kant's theories of space and time; spacial attitudes in renaissance, medieval and classical days, examples of pre-historical spacemaking, the simple, powerful calculated spacemaking of neolithic monuments. The students had to consider, above all, the totality of the space created and its context, as if it were a walk through experience expressed in model form.

There are gaps in the abilities of students of art and design, largely as a result of their earlier education. I believe it is the task of the colleges of FE to fill in these gaps in a meaningful way. The architect, therefore, has a role in departments of art and design because his discipline, which embraces both art and science, enables him to give sympathetic help in this constructive task."

C K Clutterbuck,
Lecturer in
Technical &
Computer Graphics,
Faculty of
Art & Design,
Bristol Polytechnic

DESIGN BY COMPUTERS

"In the context of this conference my brief is to present my views on 'Design ny Computer'.

definition

As the two words 'Design' and 'Computer' are used in this title, I would first like to clarify the professional computer situation as I understand it.

Computer-aided design is an established title which refers specifically to the use of computing principles in design problems related to engineering, architectural and allied professional activities.

There is a Department of Trade and Industry sponsored Computer-Aided Design Centre operating in Cambridge. The booklet describing the Centre's activities shows the special emphasis given to problem solving by the use of Computer Graphics. (1) (2)

Computer art is an established title which refers to the special 'Cybernetic Serendipity' activities of the Computer Arts Society whose members apply computing techniques to literature music and poetry as well as painting and sculpture.

The Computer Arts Society is affiliated to the British Computer Society. (3)

Design by computer in the terms I am proposing is concerned with the use of computing techniques over a very broad spectrum that lies between, but overlaps, both Computer Aided Design and Computer Arts.

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(1) Department of Trade and Industry (1972) Computer-Aided Design in Industry. DIT.

(2) Fetter W. A. (1965) Computer Graphics in Communication. McGraw Hill.

(3) Computer Arts Society Members (1973) Computers in the Creative Arts. David & Charles.

With the broad spectrum of applications in mind I will pose three questions:

Why should art and design education be intimately involved with computing?

What has art and design education to offer to computing techniques?

Where can art and design education make a start with computer education?

Why be involved?

why use computing

The basic requirements of computing are no different from the disciplines required by any designer. These basics should already exist in any design course. (4) By suggesting that Art and Design Education should embrace computing, no radical change is being demanded but the extension of facilities to include an up-to-date item of equipment or some instruction in its use. Graphic design (and I am using this title in its broadest sense to denote 'visual imagery' in any art and design course) demands the solving of problems of information and presentation by a methodical collation of all the relevant facts of a subject and designing a logical progression to a final solution. Successful use of the power of any computer installation depends on exactly the same principles.

I recently attended the first Conference on Computing in Higher Education at Lancaster University. I listened to 19 speakers who presented either theme addresses or papers to working parties. Their specialities ranged through architectural design, engineering, statistics, chemistry, mathematics, physics and geography as well as fine art and three-dimensional design. All 19 speakers referred to the importance and value, and even the necessity of 'graphics' within their particular field of computer science. They may have had some difficulty, if asked, to define precisely what graphics each considered to be appropriate for their purpose but the great need for help in this speciality was obvious.

The reason for this demand for graphics over such a range of disciplines is, of course, the necessity for communicating clearly the essence of the great volume of work which a computer can deal with so quickly. In short, a massive requirement for 'communication design' staff. 'Visual imagery' provides the clearest and speediest message transference between technologists and between technologists and laymen, but technologists do not usually have the time to study, in depth, the disciplines of aesthetics and communication design. Art and design education must provide the man (and woman) power to work in unison with the technologists.

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(4) Taylor R. (1971). A Basic Course in Graphic Design. Studio Vista.

What has art and design education to offer?

Today's technology uses:

- Computer-controlled devices which draw lines on paper - in any colour.
- Computer-controlled devices which can project images onto television-types screens - also in colour.
- Computer-controlled devices which can record on film the images generated on these television type screens.
- Computer-controlled devices which produce text matter in a number of different forms, simultaneously with computer produced illustrations.

With all this apparatus coming more and more into everyday use, art and design education has a duty to see to it that the computer-processed output is not merely technologically functional but is visually acceptable in human rather than just machine terms. Artists and designers must, and can easily and appropriately, be involved with computing to ensure that human elements determine the end results of what otherwise could be only a cold impersonal machine environment.

a new approach

Where can art and design education make a start?

At the Lancaster Conference I presented a paper under the title of 'Computer Graphics as an introduction to Computing'. The paper presented the experience in the Graphics course at Bristol Polytechnic where students are given the opportunity to produce some pictorial results from quite limited computer equipment. The chairman of the working party at which I presented this paper (an authoritive computer scientist from Reading University) summed up by saying:

> "Mr. Clutterbuck approaches computing the reverse way round to all the rest of us." "But" he continued, "this happens to be the right way round".

This approach to computing is, I maintain, within the reach of most art and design departments in schools and should pose no great problems to art and design colleges. It does call for some staff enthusiasm and the building up of some access to computer facilities. This approach to computing makes use of existing computer packages which means using a computer immediately without a great deal of possibly irksome, computer technology introduction. 'Packages' in computer terms are lists of instructions as to how to produce specified results from a computer. These lists of instructions can be likened to cookery recipes, rules for games or even knitting patterns. Someone has devised all the necessary procedures in a proper sequence.

All that the package users have to do is supply their own ingredients. Perspective drawing packages are obviously appropriate for art and design students. There are plenty of perspective packages available. At Bristol we use a standard International Computers Limited perspective drawing package which is available to any user of ICL computers. We also use another perspective drawing package developed for us by Bristol University. Almost ready for use is yet another drawing package devised by a third year graphics student who found that computer graphics provided an outlet for a mathematical idea he had first thought of at school.

Each of these drawing packages produces different end results. Because this end result is an illustration or diagram, a student's interest is aroused more easily than other computer output which may only be a mass of alphanumeric material - apparently incomprehensible and visually sterile.

There are, of course, very many computer packages which are designed to produce some form of visual image for special purposes. Every computer manufacturer provides such packages as support for their equipment. This means that it is not necessary for students, initially, to learn a great deal about computer technology such as computer language and computer operation before actually using a computer to get some kind of result.

Existing computer packages which produce pictures will have documentation which describes exactly what information is required to produce a particular end result and in what order the information should be written out. (5) Normally, this information will be written out, line by line, on specially prepared squared paper. The information in each line will then be punched onto computer cards, one card for each line. The punched cards provide the method of transferring the line-by-line information to the storage unit of the computer. According to the instructions given in the way that the computer package suggests, the information is retrieved from the computer store processed by the computer, and output in alpha-numeric form or as some other kind of visual image.

perspective drawing package

Using a perspective drawing package calls for determining the basic shape of the object to be drawn, allocating three-dimensional XYZ co-ordinates to all the salient points of the object and giving these sequential numbers. Next, eye positions from which the object is to be viewed are also given XYZ co-ordinates. All these co-ordinates are written out, together with a list of which points are to be joined to make a complete drawing. With the list of co-ordinates, the eye positions and the list of lines the computer can retrieve the information from its store, apply a formula which is contained in the original package, and transorm the three-dimensional XYZ measurements to two-dimensional XY perspective measurements for each given eye position. One set of co-ordinates and lines can be retrieved, over and over again, for any number of eye positions.

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(5) International Computers Limited. Perspective Drawing Package. ICL Limited.

This is the kind of computer work which, I maintain, makes a practical way for art and design courses to introduce computer use. Students very quickly see a return for their efforts. The drawing which results will usually have errors which are obvious and easy to identify and this identification and correction can be quite a fascinating 'chore' and an encouragement to students to keep trying. Once over the first hurdles of making a computer do a job of work then any students whose interests are aroused will be off on their own ideas and at their own speed.

disciplines of computing

To produce drawings by using a computer package calls for all the basics of computing to be applied which makes it a viable educational activity in computing as well as art and design terms.(6) These basics are:

Precise definition of a problem and the formulation of the method of solution.

Data preparation which is the assembly in a logical order of all the parameters of the problem.

Error identifcation and up-dating - the necessary procedures in any professional problem-solving situation.

Information storage and retrieval - and drawings, particularly sequential animation drawings are a prime example of computer information retrieval. That is, the recall of one compilation of original information in a number of variations.

All these are disciplines that apply to any form of information design.

equipment

It may be said that art and design departments and art and design colleges may not have access to sophisticated computer equipment that will produce drawings or visual images. Perspective packages may still be used by pupils or students with a little co-operation from a University, Polytechnic or similar educational computer centre. At Bristol we have only just installed a graph plotter - this is a computer-controlled machine that will make drawings on paper. Until now, most of our graphics were produced by using a computer perspective package to carry out the mathematical transformation of X Y Z co-ordinates of a three-dimensional object into X Y perspective co-ordinates and print these out as a column of figures which could be plotted onto graph paper. A time-consuming process, but the computer was doing all the 'donkey-work' and students were obtaining accurate drawings as a result - simultaneously learning how to use the computer as a tool to do work.

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(6) Court R. (1970). Fortran for Beginners. Holmes McDougall.

value of using computer

As a tool to do work the computer can:

- Extend the designers capacity for visualising ideas.
- Allow much more experiment with the illustration of forms and shapes than is possible manually.
- Take over repetitive drawing work which is time-consuming.

I believe it is currently recognised that computer education in schools is important at both vocational and social levels:

Vocational in order to meet the growing demand for the great number of people who will be needed to make computing their career.

Socially because students are growing up into a world where computing will be as normal as motoring, telephoning or television viewing.

current developments

What is happening now will have a profound effect on art and design education in the next year or so:

- There is a very active Computer Education Group of the Schools Council backed by the National Computing Centre and International Computers Limited. (7)
- There is the International Centre for Computing in Secondary Education operating from Edinburgh.
- A 'Computing in the School' Conference was held at Oxford last month.
- Another similar conference is being held at Imperial College this month.

All this activity will mean that every area of a school will be influenced in some way or another by some form of computer processing. Art and design areas should welcome this opportunity for widening the scope of their studies.

working with computers

I have proposed that art and design education must include opportunities for students to learn how to use computers, but there is another aspect which must not be overlooked - this is - working with computers.

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(7) Computer Education. Computer Education Journal. Schools Council Computer Education Group.

As with any other technology, computers and computing create an enormous demand for support material, mostly graphics - instruction manuals; visual aids for demonstration and training; exhibitions and displays as well as sales and promotion material. (8) Only people with some knowledge of the subject can be expected to give adequate service in this field of design which already offers good career opportunities and will offer far more in the future as the scope of computing increases. The influence of the trained graphic designer and the typographer will be essential in general computer environments.

In schools, at first, there could be some scepticism and opposition from both staff and students to the use of electronic data processing as a design tool. There will be some problems of introduction in many cases:

Staffs' limited knowledge of programming and general computer processing principles.

Limited computer equipment or access.

Integration of computer studies in an already full art and design syllabus.

It has helped at Bristol Polytechnic to be able to call on the expertise of the Mathematics, Statistics and Computing Department. This provided an interesting 'combined operation' of bringing the drawing-board approach and the mathematical formula approach together - 'Visual' problem solving combined with 'Numeric' problem solving.

The mathematics staff also had their problems when faced with the demands of the Graphics Department students:

- They found a vast range of mathematics background from nearly non-numerate to 'A' level.
- They found the need to show the widest possible area of computer application.
- They found the need for stimulation of particular students ideas.

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(8) Ferranti Limited. (1967). Argus Display Systems. Ferranti Limited.

(9) Clutterbuck C. K. (1966). 3-D Scale Drawing. English University Press.

But last week, at the Annual Conference of the National Society for Art Education it was made plain that many teachers in art and design areas of schools and colleges would be far from dismayed at facing up to the problems of introducing computing studies. I presented a talk and film about my ideas for introducing computing to art and design students and anticipated some scepticism. Very few of the audience had any experience of computing other than the common conversational one of discussing the enourmous 'clangers' that hit the headlines now and then. But the number and the character of the comments and questions that resulted from the talk proved to me that many art and design teachers will be very keen to work with computers if only they can be given some help and guidance on how to make a start.

With the growing opportunities for secondary pupils to become aware of the potential of computing, art and design courses cannot stand aside. And it is the ease of getting 'hands-on' to a computer by using graphics packages and seeing a visually understandable output, which I am stressing.

Computer Graphics make it possible for pupils who already recognise the power of the computer to extend their studies but also provide an introduction that can capture the interest of pupils who might otherwise reject through ignorance, something which could be of tremendous benefit to them in the future."

PROJECT A

To formulate the objectives of vocational art and design education and in the light of these objectives to consider which elements in the present system are redundant, which should be retained, and to identify which new elements would be desirable.

C T Ferguson,
Staff Tutor,
Coombe Lodge.

Introduction to Project A

"You may find it useful before starting to formulate the specific objectives of vocational art and design education to think about vocational educational objectives in general and then to consider the major objectives of art and design education.

This will, perhaps, give you some points to consider in carrying out the first part of this project. In relation to the first of these, Davis has written that the writing of objectives is becoming increasingly important and allows one to:

1. Limit the task and remove ambiguities and difficulties of interpretation.
2. Ensure that measurement is possible so that the quality and effectiveness of the learning experience can be determined.
3. Decide which learning strategy is likely to be optimal.
4. Provide a complete but terse summary of the course which can serve as a conceptual scaffold or "advance organiser" for learning.

Referring to the second group of objectives the National Art Education Association of America have listed a series of objectives which although over emphasising the correlation between 'visual' and 'art' and although directed at the school sector still have use for the FE sector. These are that art and design education should enable the student to demonstrate his capacity to:

1. Have a high response to, and personal involvement in sensory experience.
2. Understand multi-dimensional relationships with the environment.
3. Think and act creatively.
4. Increase his range of skills.
5. Acquire a knowledge of the history of disciplines relating to art and design.
6. Make critical appraisals relating to his educational and professional experience.
7. Understand the nature of art and design and the creative process.

You may feel that these very general educational objectives are not specific enough to help you in your discussions and without wishing to pre-empt anything that Peter Feltham will say in the second part of this introduction I have listed six more detailed objectives specifically for further education:

1. To allow the student to develop positive concepts of his role in society as an artist or designer.
2. To develop his ability to act flexibly and operate successfully in situations of rapid social and industrial change.

3. To provide the student with direct experience of a wide range of activities and techniques so that he may operate from a position of informed choice.
4. To provide time, facilities and help to allow him to follow a course with a high degree of creativity and innovation.
5. To identify situations which will enable the students to develop self-motivation and self-discipline.
6. To allow students to identify and solve problems within their competence and to organise their time and resources in the solution of their problems in an effective manner.

P S Feltham,
Director of Studies,
Graphic Design,
Faculty of Art & Design,
Bristol Polytechnic.

Supplement to project introduction

"The formulation of the objectives of courses requires us to implement what should be inherent in any design course - the design process, - with particular reference to the first and final stages, ie. understanding the problem facing us and testing the validity of the solution reached.

Understanding or discovering the problems is the first task, and the two words sometimes, but not always, mean the same thing. Further analysis of what are considered to be the problems often uncovers a deeper causal factor which is the real problem, underlying the more easily recognisable ones. Thus problem solving is frequently problem finding. The final stage, the validation of the solution, ie. the course, is usually tested by the student when seeking employment in the design field.

Naturally, there are several stages in the design process which come between the understanding of the problem and the testing of the validity of the solution:
Collection of information - A clear understanding of the information available and the constraints which exist in the system of implementation is necessary.
Problem solving - this involves the process of organisation, restructuring and re-appraisal.
Selection of system - to achieve objectives - this needs familiarisation with the capabilities of staff and related resources.
Communication of intentions - to both staff and students.

We all acknowledge the necessity to create a harmonious balance in our courses considering the educational content, training elements, specialist interests of student requirements against a background of environmental and social responsibility.

Education - Should be as wide as possible with an inbuilt versatility across a number of unifying disciplines. (Education for designers is based on the learning of skills and the acquisition of a philosophy).
Training - In the techniques and practices of the professional being pursued ie. technical knowledge, practical knowledge and so on.

Specialist Interest - Opportunities should be given for the student to develop specialist interests towards particular areas of need and gain insight into the adjustments needed to solve problems outside a further education establishment. His social responsibilities in this technological world, and the need to realise his professional involvement within a business context must be developed."

Syndicate Reports

Syndicate 3 approaced the problems of the education of artists and designers by analysing the aims and objectives of a course in terms of what the student ought to be able to do on completing the course. This profile of abilities would form the basis for course development. Three broad aims were specified:

1. to maximise the learning abilities of the students.
2. to ensure standards of initial acceptance by the profession related to their study.
3. to give the student through the synthesis of 1 and 2 above the ability to contribute to society through that profession.

Having set the general context of aims, the group then concentrated on the design process. This wasstudies through the production of a flow diagram in order to create some visual indication of the complex inter-relationships between each step. From this stage the syndicate was able to draw up a profile of student abilities which each student would need to learn in order to move from the initial problem, or stimulus, to a solution. Thus the design process equates with the educational process itself.

The stages the syndicate identified in the design process were: stimulus (which could come from various sources); information input; analysis (decision on whether a problem exists); synthesis; design proposal; validation; implementation; solution, and evaluation.

The course content at most of these stages was suggested: information input (information retrieval, research and recording methods); analysis (sorting and selecting); identification of the problem (clarification of brief, documentation); analysis (analysis of information to include other solutions, identification of constraints - psychology, economics, sociology etc.); synthesis (hypothesis); design proposal (techniques of presentation); validation (checking of proposals against criteria); implementation (programming, technical considerations, production); evaluation (critical evaluation and feedback, which could be in the form of a profile of the students' abilities on completion of the course).

The syndicate noted that the implications of the process were as important as its statements eg. the degree of control required at all stages, the need for students to be able to work with people from different backgrounds, and experience of industry.

The group believed that used as a model to apply to specific subjects and to courses of different lengths and levels, this form of planning could be of considerable benefit.

The other syndicates approached the project in a rather different way, by suggesting overall aims and more specific objectives. They stressed in particular that vocational courses must be both alive to the needs of industry and to the needs of the student. Syndicate 4 demanded a 'breadth of educational content', while syndicate 3 expected a vocational course to:

"develop an articulate and creative individual of enquiring mind aware of and competent to fulfil his function in industry and society, and to foster (in the student) the talents involved in design processes with particular emphasis on the needs of industry and employment."

Syndicate 1 stressed that the course should be relevant to the needs of the individual and the future rather than his immediate technical qualifications and the present. It recommended that vocational courses should take more then one form, ie. full-time, part-time, day release etc. Links between schools, colleges and employers should be a major part of any vocational course responsibility. On course content, this group felt that visual grammar of drawing should be an integral part of the vocational course for the purpose of both personal development and as the means to an end viewpoint. Technical and presentation skills were of great important. It was thought necessary for vocational course students to have a working knowledge of the course policy, objectives and context, and for these points to be a constant topic of discussion between staff and students. On external constraints and influences, the group identified the problem of students, staff, institutions, industry, the DES and the LEA understanding, agreeing upon and supporting the necessary relationships between vocational course areas and industry; the restriction upon entry standards of inconsistant and fluctuating political and financial policies; the restrictions that entry standards in other subject areas inflict upon art and design education; the present diverse range of courses and institutional types, giving rise to confusion, and the public's view of art and design education.

The question of rationalisation in art and design education was also raised by syndicate 4. They asked for a course, offered on a national basis, which would provide students with design problems based upon economic reality, and involved with public bodies and industry. A system of core studies in basic disciplines to provide the material needed to achieve the professional standards later required by industry should be implemented. They would include not only the basic design disciplines but communication, business and management studies. A professional attitude to all work was vital. There should be liaison with industry, wider use of contemporary specialised equipment, opportunities for transfer, and a diagnostic period at the start of the course. Many of these suggestions were also made by syndicate 2. They also added the following objectives: to stimulate non-visual as well as visual creativity; to provide experience of working individually and in groups to formulate solutions to design problems. They recommended that courses be of two distinct types: highly specialised and more general, and that students should have the possibility of transfer from one type to another, or to another of the same type.

PROJECT B

"To consider the possibilities of designing new forms of course structure in the art and design field"

P S Feltham,
Director of Studies,
Graphic Design,
Faculty of Art & Design,
Bristol Polytechnic

Introduction to the Project

"The two projects for this conference together form a 'what and how of design education' situation. Project B logically follows on from the defined objectives and established contents of courses. The 'how' situation is, if anything, more complex than the 'what' situation. Course design and curriculum development is an all-embracing activity, requiring a comprehensive balance safeguarding the total objectives of the course (educational and otherwise). Adequate provision should be made for the individual student's requirements, within an organised structure, which makes best use of the available staff and resources of the associated educational and industrial establishments.

In my introduction to Project A I made reference to the design process, emphasising the task of understanding or discovering the problem and to the validation process. In the second project the important points for me to stress are intermediate to understanding the problem and validation - the clear understanding of the systems used to implement courses and the compatible structure, which involves organisation, timetabling etc; the human relationships (staff to students, staff to staff) as resources to draw upon and update; the all-important communication of intentions in order that such systems implemented can continue to evolve.

Some of these constraints are imposed through a logical analysis of the subject fully recognised by those designing courses. Other constraints are imposed by outside bodies, e.g. the Dip AD, local education authorities, Government Reports etc. One of the main restraints recently developed has been the effect of the implementation by many local authorities of the staff student ratios recommended in the Delany Report, which may affect enrolment numbers, and perhaps the staffing of courses. The Report of the Association of Municipal Corporations on student staff norms recommended, with Ministry backing, that local education authorities organise their further education to reach the following ratios within four years

BAND A 7.5 - 8.5:1 for laboratory work, i.e. science, technology, art and design.

BAND B 9.2 - 10.2:1 for lecturing in arts, business studies, economics, etc.

The Government White Paper, 'A Framework for Expansion' said that within a decade there should be an average SSR of 10:1.

Soon we will know what is in the Gann Report. What will be its recommendations, what constraints will it impose? what new opportunities will be available after its publication?

We must remember that constraints which at the time of their declaration may seem to be 'thorns in the flesh' may in time come to be viewed rather differently.

Now for a few words on how we may implement and incorporate such findings into our course structures.

Will a MATRIX system maximise the effectiveness of our resources? or would a MODULAR approach better fit the type of courses we are running.

The concept of modular courses is certainly in the process of being tested in many colleges. To quote from Dr. Ann Hawkins (of Hatfield Polytechnic) in her paper 'The Educational Implications of Modularisation' (May 1973)

> "Education in a sophisticated society is a contrived activity and it is in a state of constant redefinition and re-direction. Pressures in this country at the present time which lead to change derive from the demands of the economic system and greater influence and opportunity for socio-economic mobility. These move away from selective to more adaptive modes of education, and to the requirement of a more systematic approach in order that a wider spectrum of students can more reliably be brought to the required standards."

Should we therefore consider modular organisation for our courses taking the definition of a module as 'sharing the properties of the course but being separately timetabled or even separately assessed?

In the modular system there are problems that may be turned to advantage. The modular system may become multi-disciplinary which can create problems for the vocational student who is dependent upon the demands of industry who may want him to have more narrow specialisms, but may also be advantageous in giving a more rounded education. The modular system, in being multi-disciplinary, may lead us to transcend traditional subject barriers completely and operate our courses on an entirely inter-disciplinary basis, concentrating not on subjects so much as their inter-relationship. A further problem which might lead, after consideration to an improved system, is that of assessment in modular courses. Should evaluation be built into the framework of a modular course perhaps as continuous assessment? Finally, there is the possibility of using programmed instruction techniques to cope with the many options being taken, perhaps as summative evaluation, or phase testing."

Syndicate Reports

All four syndicates took the view that modular courses were the best way to cater for the individual needs of students, although they recognised that such a structure would create certain problems which would have to be solved.

Syndicate 1 thought that the modular system would suit all courses in the field of art and design. It would lend itself to a high degree of flexibility in the formation of specific as well as non-specific course curricula, though it would need careful planning, perhaps by the use of a computer. Each module would have a 'hard side' and a 'soft side'. The hard side would relate to main study requirements, while the soft side would offer the possibility of self electives. Each module would have to be carefully examined with regard to the type and group of students it was meant to serve. There would have to be constant re-appraisal of the learning potential of each module and allowance made for the possibility of some relationship between modules. Effective links with industry and secondary education would be essential.

On vocational courses in particular, the syndicate produced a diagram to show how the modular system could be applied, and how two different courses could be offered, using the same modules. Members suggested that during vacations some time should be spent in industry, and that for students going on to higher education after the first stage (C1 or C2) some of the resources could be 'carried forward' from the previous stage, programmed for modular use, in accordance with students' needs.

Syndicate 3 raised a large number of general points arising from the aims and objectives discussed in Project A. On the concept of a modular structure they noted the problems of whether the students were able to select the most appropriate course, and the need for tutorial guidance in this matter. They proposed a system of a common core with various specialisms available related to college resources. They felt that mobility of students from one college to another was desirable, but would cause problems of compatibility of course content and credit worthiness. A central body would be freed from local politics though national validation would have to ensure it avoided restricting initiative and responsibility. Credit should be given for projects of varying lengths.

On the question of staffing and course content, the group reported that there would be a need for in-service training. Projects should be set up as a result of staff consultation. They should help the individual develop his potential, and should be injected into the general pattern of learning. A structured system would be needed for the staff to discuss with the students the nature of their development, and the exercises the students worked on should be related to each other. With reference to curriculum, the syndicate felt that training was an integral part of good education. Some members felt that photography and other techniques should not be allowed to diminish the attention paid to drawing, which developed in the student a deepening capacity for visual perception. The current problem of students reacting against training and the

acquisition of skills, preferring instead to do social problems, because they saw training as connected with industrial profits which they viewed as unethical was raised.

On validation, the group felt that a student ought to be able to leave a course, if he had a valid reason, reserving the right to continue it later or transfer to another course. It would be of value if it linked with comparable examinations in other disciplines, e.g. 'A' levels, OND etc. Possibilities of transferability should be examined not only between vocational and Dip AD courses but also in the Dip HE proposals.

Syndicate 2 split its discussion into two parts according to the level of the vocational course concerned. At the 16-19 stage it mooted the possibility of art and design students remaining in the sixth form at school, and being released for specialist courses in art and design by the use of 'link' courses. Colleges of art and design for this age group or those which embrace this age range should extend their courses to meet the full educational needs of young students. Colleges of FE could provide two year courses in art and design comparable with OND courses in other disciplines. The group suggested that there could perhaps be a new education act, introducing a tertiary system of education and establishing junior colleges in which a two year course in art and design would be one of many options. Perhaps students on leaving school should enter employment for a period before going on to FE or study instead through part time education. The group emphasised that there could be no single universal solution for geographical and other reasons.

Moving on to consider vocational courses for those over 19, the syndicate felt that the differences accorded in status to existing vocational and Dip AD courses were unreasonable. They thought that all courses should be of the sandwich type, bearing in mind both the students' and course needs and the capacity of industry to accept the burden of industrial attachment. The system should be flexible enough to reflect changes in industry and society. The syndicate reported that as the employers of those completing courses in art and design were of a wide variety, not easily identifiable, and often firms were small in size, there was a vital distinction between the needs of employers in art and design and other subject areas. This difference should be borne in mind when devising courses.

Finally the group stated that the possibilities outlined for courses for 16-19 year old students were conceived primarily, though not exclusively as first stages leading on to advanced vocational courses. The group saw few opportunities open to those leavers armed only with the two year intermediate terminal qualification.

The fourth syndicate examined the effect of modular courses on college structure. They looked briefly at the matrix type of structure as a possible alternative to the more familiar hierarchical structure which they thought inhibited the freedom of movement between departments and sections. They concluded that the matrix offered greater flexibility but presented some problems

of management and communication. It was agreed that in fact colleges of art had been organised along these lines, without being formally identified as having a matrix structure, for many years. In fact an empirical amalgam of matrix and hierarchical structures had operated successfully. Calling it a 'cellular' structure, the group said that this type of organisation maximised the opportunities of inter-disciplinary study and contact, with complementary studies breaking across departmental boundaries and bringing students of different disciplines together. Such a system, operated not only within colleges but across the whole field of interested bodies - the universities, the NCDAD, other colleges, industry etc. - would ned the back-up of an information service. This would enable students to make suitable choices of course modules in other colleges in cases where their own did not offer the appropriate studies. Exchanges of staff and students between areas should also be beneficial.

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